From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

IM, Jae, Ryong
RM 502, New Seoul Building
828-8, Yeoksam-dong
Kangnam-ku
Seoul 135-080
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year)
17 November 2000 (17.11.00)

Applicant's or agent's file reference
P99A41268

IMPORTANT NOTIFICATION

International application No.
PCT/KR99/00690

International filing date (day/month/year)
17 November 1999 (17.11.99)

1. The following indications appeared on record concerning:

[X] the applicant [X] the inventor [ ] the agent [ ] the common representative

Name and Address

LEE, Hyoung, Chan
Samho Garden Mansion 8-409
30-2, Banpo-dong
Seocho-ku
Seoul 137-040
Republic of Korea

State of Nationality: KR
State of Residence: KR
Telephone No.:
Facsimile No.:
Teleprinter No.:

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[ ] the person [X] the name [ ] the address [ ] the nationality [ ] the residence

Name and Address

RHEE, Hyoung, Chan
Samho Garden Mansion 8-409
30-2, Banpo-dong
Seocho-ku
Seoul 137-040
Republic of Korea

State of Nationality: KR
State of Residence: KR
Telephone No.:
Facsimile No.:
Teleprinter No.:

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

[X] the receiving Office
[X] the International Searching Authority
[ ] the International Preliminary Examining Authority
[X] the designated Offices concerned
[ ] the elected Offices concerned
[ ] other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer
Christine Carrié

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

KIM, Yong, In
15th Floor Yo Sam Building
648-23, Yeoksam-dong
Kangnam-ku
Seoul 135-080
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year)
30 août 2001 (30.08.01)

Applicant's or agent's file reference
P99A41268

IMPORTANT NOTIFICATION

International application No.
PCT/KR99/00690

International filing date (day/month/year)
17 novembre 1999 (17.11.99)

1. The following indications appeared on record concerning:

[ ] the applicant [ ] the inventor [X] the agent [ ] the common representative

Name and Address

LEE, Byeong Gil
#401, Sang-ma building
828-23 Yoksom-dong
Kangnam-gu
Seoul 135-935
Republic of Korea

State of Nationality

State of Residence

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[X] the person [X] the name [X] the address [ ] the nationality [ ] the residence

Name and Address

KIM, Yong, In
15th Floor Yo Sam Building
648-23, Yeoksam-dong
Kangnam-ku
Seoul 135-080
Republic of Korea

State of Nationality

State of Residence

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

[X] the receiving Office
[ ] the International Searching Authority
[X] the International Preliminary Examining Authority
[ ] the designated Offices concerned
[X] the elected Offices concerned
[ ] other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Dominique DELMAS

Telephone No.: (41-22) 338.83.38

09/763561
SOLO

PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Commissioner
US Department of Commerce
United States Patent and Trademark Office, PCT
2011 South Clark Place Room CP2/5C24
Arlington, VA 22202
ETATS-UNIS D'AMERIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 04 April 2001 (04.04.01)	
International application No. PCT/KR99/00690	**Applicant's or agent's file reference** P99A41268
International filing date (day/month/year) 17 November 1999 (17.11.99)	**Priority date** (day/month/year) 19 July 1999 (19.07.99)
Applicant RHEE, Hyoung, Chan et al	

1. The designated Office is hereby notified of its election made:

[X] in the demand filed with the International Preliminary Examining Authority on:

10 January 2001 (10.01.01)

[ ] in a notice effecting later election filed with the International Bureau on:

2. The election [X] was

[ ] was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO **34, chemin des Colombettes** **1211 Geneva 20, Switzerland**	Authorized officer Zakaria EL KHODARY
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

09/763589
5200

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

LEE, Byeong Gil
#4202, Trade Tower
World Trade Center
Kangnam-ku
Seoul 135-729
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year)
14 March 2001 (14.03.01)

Applicant's or agent's file reference
P99A41268

IMPORTANT NOTIFICATION

International application No.
PCT/KR99/00690

International filing date (day/month/year)
17 November 1999 (17.11.99)

1. The following indications appeared on record concerning:

[X] the applicant [ ] the inventor [ ] the agent [ ] the common representative

Name and Address
1.RHEE, Hyoung Chan
2.Hong, Jong Su

State of Nationality: KR
State of Residence: KR
Telephone No.:
Facsimile No.:
Teleprinter No.:

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[X] the person [ ] the name [ ] the address [ ] the nationality [ ] the residence

Name and Address
RINGFREE CO.,LTD.
Dusan Bearstel 1308
1319-11 Seocho-2-dong
Seocho-ku
Seoul 137-040
Republic of Korea

State of Nationality: KR
State of Residence: KR
Telephone No.:
Facsimile No.:
Teleprinter No.:

3. Further observations, if necessary:
Applicant in box 2 is the new applicant for all designated states except US. RHEE and HONG remain applicant/inventors for the US only.

4. A copy of this notification has been sent to:

[X] the receiving Office
[X] the International Searching Authority
[ ] the International Preliminary Examining Authority
[X] the designated Offices concerned
[ ] the elected Offices concerned
[ ] other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer
Maria Victoria CORTIELLO

Telephone No.: (41-22) 338.83.38

Form PCT/IB/306 (March 1994)

003894001

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION OF THE RECORDING OF A CHANGE

(PCT Rule 92bis.1 and Administrative Instructions, Section 422)

To:

LEE, Byeong Gil
#4202, Trade Tower
World Trade Center
Kangnam-ku
Seoul 135-729
RÉPUBLIQUE DE CORÉE

Date of mailing (day/month/year)
14 March 2001 (14.03.01)

Applicant's or agent's file reference
P99A41268

IMPORTANT NOTIFICATION

International application No.
PCT/KR99/00690

International filing date (day/month/year)
17 November 1999 (17.11.99)

1. The following indications appeared on record concerning:

[ ] the applicant [ ] the inventor [X] the agent [ ] the common representative

Name and Address

IM, Jae, Ryong
RM 502, New Seoul Building
828-8, Yeoksam-dong
Kangnam-ku
Seoul 135-080
Republic of Korea

State of Nationality

State of Residence

Telephone No.
82 2 554 9068

Facsimile No.
82 2 508 7269

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

[X] the person [ ] the name [ ] the address [ ] the nationality [ ] the residence

Name and Address

LEE, Byeong Gil
#4202, Trade Tower
World Trade Center
Kangnam-ku
Seoul 135-729
Republic of Korea

State of Nationality

State of Residence

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

[X] the receiving Office
[X] the International Searching Authority
[ ] the International Preliminary Examining Authority
[X] the designated Offices concerned
[ ] the elected Offices concerned
[ ] other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer
Maria Victoria CORTIELLO

Telephone No.: (41-22) 338.83.38

Form PCT/IB/306 (March 1994)

003893952

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Artcle 36 and Rule 70)

9/763589

Applicant's or agent's file reference P99A41268	**FOR FURTHER ACTION**	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. **PCT/KR99/00690**	International filing date *(day/month/year)* 17 NOVEMBER 1999 (17.11.1999)	Priority date *(day/month/year)* 19 JULY 1999 (19.07.1999)

International Patent Classification (IPC) or national classification and IPC

IPC7 H04M 3/487

Applicant

[RHEE Hyoung Chan et al] RINGFREE CO, LTD

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 3 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of _____ sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demamd	Date of completion of this report
10 JANUARY 2001 (10.01.2001)	12 NOVEMBER 2001 (12.11.2001)

Name and mailing address of the IPEA/KR	Authorized officer
Korean Intellectual Property Office Government Complex-Daejeon, Dunsan-dong, Seo-gu, Daejeon Metropolitan City 302-701, Republic of Korea Facsimile No. 82-42-472-7140	MIN, Hea Jung Telephone No. 82-42-481-5711

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International aplication No.
PCT/KR99/00690

I. Basis of the report

1. With regard to the elements of the international application:*

☒ the international application as originally filed

☐ the description:
pages _____ , as originally filed
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

☐ the claims:
pages _____ , as originally filed
pages _____ , as amended (together with any statment) under Article 19
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

☐ the drawings:
pages _____ , as originally filed
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

☐ the sequence listing part of the description:
pages _____ , as originally filed
pages _____ , filed with the demand
pages _____ , filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.
These elements were available or furnished to this Authority in the following language _____ which is

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application(under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).

3. With regard to any **nucleotide** and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

☐ contained inthe international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disc losure in the international applicationas as filed has been furinshed.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheet _____

5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box(Rule 70.2(c)).**

* *Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed." and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).*

** *Any replacement sheet containing such amendments must be referred to under item I and annexed to this report.*

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International aplication No.
PCT/KR99/00690

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-19	YES
	Claims		NO
Inventive step (IS)	Claims		YES
	Claims	1-19	NO
Industrial applicability (IA)	Claims	1-19	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

citations

D1: JP06-121043 A (TAKINO YOSHIHIDE, SUZUKI TATSUO) 28 APRIL 1994

D2: KR1999-46605 A (LG TELECOM. LTD.) 5 JULY 1999

1. concerning claims 1 - 17

D1 discloses a method for generating voice commercial information through a communication system including a call process function carrying out a transfer of a commercial information to an originating telephone instead of a ringback tone during a communication wait after finishing dialling.

D2 is related to a system and a method to provide a voice/text commercial service in mobile communication system.

Therefore, the method for generating commercial information through a communication system in claims 1-17 is extremely similar with the methods of D1 and D2.

2. concerning claims 18 and 19

D1 includes a switch, a memory for generating voice commercial information, and a voice commercial information ringback tone generating system.

D2 includes a commercial information server, a system for providing a voice/text commercial information, a database related to subscriber's private information and etc.

Therefore the commercial information server, the commercial information ringbacktone generating system and the subscriber's private information server in the claims 18 and 19 are already included in D1 and D2.

From what it's mentioned above, It can be concluded that Claims 1-19 lack an inventive step under PCT Article 33(3). The invention claimed in claims 1-19 possesses novelty according to PCT Article 33(2) and is considered to be industrially applicable under PCT Article 33(4).

09/763589
5010

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 January 2001 (25.01.2001)

PCT

(10) International Publication Number
WO 01/06735 A3

(51) International Patent Classification[7]: H04M 3/487

(21) International Application Number: PCT/KR99/00690

(22) International Filing Date:
17 November 1999 (17.11.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

1999/29153	19 July 1999 (19.07.1999)	KR
1999/33113	12 August 1999 (12.08.1999)	KR
1999/41268	27 September 1999 (27.09.1999)	KR

(71) Applicant *(for all designated States except US)*: **RINGFREE CO.,LTD.** [KR/KR]; Dusan Bearstel 1308, 1319-11 Seocho-2-dong, Seocho-ku, Seoul 137-040 (KR).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **RHEE, Hyoung, Chan** [KR/KR]; Samho Garden Mansion 8-409, 30-2, Banpo-dong, Seocho-ku, Seoul 137-040 (KR). **HONG, Jong, Su** [KR/KR]; Jugong Apt., 402-205, Haan-2-dong, Kwangmyung City, Kyunggi-do 423-062 (KR).

(74) Agent: **LEE, Byeong Gil**; #401, Sang-ma building, 828-23 Yoksom-dong, Kangnam-gu, Seoul 135-935 (KR).

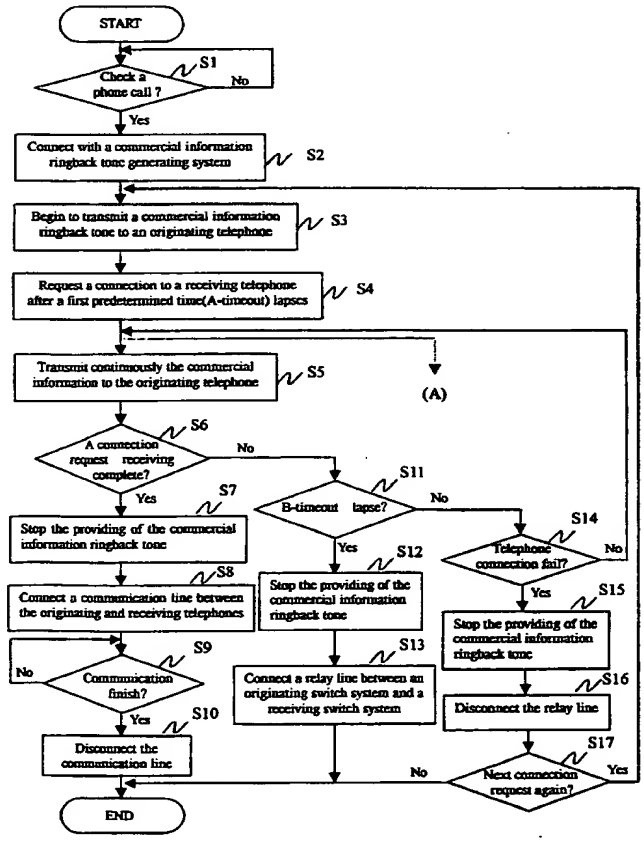
(81) Designated States *(national)*: AU, BR, CA, CN, JP, US.

(84) Designated States *(regional)*: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published:
— *with international search report*

[Continued on next page]

(54) Title: METHOD AND DEVICE FOR GENERATING VOICE/TEXT/IMAGE COMMERCIAL INFORMATION RINGBACK TONE DURING COMMUNICATION WAIT



(57) Abstract: Voice/text/image commercial information generating method and device during a communication is on wait. The method includes the steps of: checking a telephone call, connecting with a commercial information ringback tone generating system/device at an originating or a receiving communication system when the call is detected, beginning to transmit a commercial information in forms of voice/text/image instead of the original ringback tone or a guide message to an originating telephone from the commercial information ringback tone generating system during a communication wait, requesting a connection to a receiving telephone from the commercial information ringback tone generating system after an A-timeout lapses, continuously transmitting the commercial information to the originating telephone, checking whether the receiving telephone accepts the connection request, stopping the providing of the commercial information ringback tone if the telephone connection is made, connecting a communication line between the originating and the receiving telephones, checking whether the communication is finished, and disconnecting the communication line if the communication finishes.

WO 01/06735 A3

(88) Date of publication of the international search report:
9 August 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/KR 99/00690

CLASSIFICATION OF SUBJECT MATTER

IPC[7]: H 04 M 3/487

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC[7]: H 04 Q, H 04 M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 96/05684 A1 (QUANTUM SYSTEMS, INC.) 22 February 1996 (22.02.96) abstract, fig. 1; page 10, line 15 - page 15, line 20; page 19, line 4 - page 22, line 17; page 23, line 24 - page 25, line 16; page 34, line 13 - page 37, line 10.	1, 3-15, 18, 19
A	GB 2 316 268 A (BLAKE, W.) 18 February 1998 (18.02.98) abstract, figs. 1, 2; page 2, lines 1 - page 4, line 20; page 5, line 5 - page 7, line 29.	1, 3, 5, 6, 9, 12, 18, 19
A	WO 98/36585 A2 (NORTHERN TELECOM INC.) 20 August 1998 (20.08.98) abstract, figs. 1, 2a, 2b; page 4, line 5 - page 5, line 21; page 6, line 11 - page 7, line 26.	1, 3, 11, 13, 16, 18, 19
A	US 5 539 809 A (MAYER et al.) 23 July 1996 (23.07.96) abstract, figs. 1, 2; column 1, lines 27 - 49.	1, 4, 18, 19
A	US 4 811 382 A (SLEEVI, N.F.) 7 May 1989 (07.05.89) abstract, fig 2; column 2, lines 40 - 58.	1, 5, 17-19

☐ Further documents are listed in the continuation of Box C. ☒ See patent family annex.

* Special categories of cited documents:
„A" document defining the general state of the art which is not considered to be of particular relevance
„E" earlier application or patent but published on or after the international filing date
„L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
„O" document referring to an oral disclosure, use, exhibition or other means
„P" document published prior to the international filing date but later than the priority date claimed
„T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
„X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
„Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
„&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 January 2001 (17.01.2001)	13 February 2001 (13.02.2001)
Name and mailing adress of the ISA/AT Austrian Patent Office Kohlmarkt 8-10; A-1014 Vienna Facsimile No. 1/53424/535	Authorized officer LOIBNER Telephone No. 1/53424/323

Form PCT/ISA/210 (second sheet) (July 1998)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/KR 99/00690

Patent document cited in search report			Publication date	Patent family member(s)			Publication date
GB	A1	2316268	18-02-1998	GB	A0	9616523	25-09-1996
				GB	A0	9716358	08-10-1997
US	A	4811382	07-03-1989	US	E	34380	14-09-1993
US	A	5539809	23-07-1996	JP	A2	6237300	23-08-1994
WO	A1	9605684	22-02-1996	AU	A1	31021/95	07-03-1996
				AU	B2	685982	29-01-1998
				CA	AA	2197204	22-02-1996
				EP	A1	776565	04-06-1997
				EP	A4	776565	17-11-1999
				JP	T2	9506232	17-06-1997
				JP	B2	2947614	13-09-1999
				NZ	A	290315	25-03-1998
				US	A	5557658	17-09-1996
				AT	E	183350	15-08-1999
				AU	A1	22530/92	25-01-1993
				CA	AA	2110711	07-01-1993
				DE	C0	69229789	16-09-1999
				EP	A1	593556	27-04-1994
				EP	A4	593556	09-08-1995
				EP	B1	593556	11-08-1999
				JP	T2	6508968	06-10-1994
				JP	B2	2899991	02-06-1999
				MX	A1	9203084	01-08-1993
				NZ	A	243233	26-08-1994
				SG	A1	45435	16-01-1998
				US	A	5321740	14-06-1994
				WO	A1	9300763	07-01-1993
				US	A	5428670	27-06-1995
WO	A2	9836585	20-08-1998	EP	A2	962090	08-12-1999
WO	A3	9836585	19-11-1998				

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
25 January 2001 (25.01.2001)

PCT

(10) International Publication Number
WO 01/06735 A2

(51) International Patent Classification[7]: H04M

(21) International Application Number: PCT/KR99/00690

(22) International Filing Date:
17 November 1999 (17.11.1999)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
1999/29153 19 July 1999 (19.07.1999) KR
1999/33113 12 August 1999 (12.08.1999) KR
1999/41268 27 September 1999 (27.09.1999) KR

(71) Applicants and
(72) Inventors: RHEE, Hyoung, Chan [KR/KR]; Samho Garden Mansion 8-409, 30-2, Banpo-dong, Seocho-ku, Seoul 137-040 (KR). HONG, Jong, Su [KR/KR]; Jugong Apt., 402-205, Haan-2-dong, Kwangmyung City, Kyunggi-do 423-062 (KR).

(74) Agent: IM, Jae, Ryong; RM 502, New Seoul Building, 828-8, Yeoksam-dong, Kangnam-ku, Seoul 135-080 (KR).

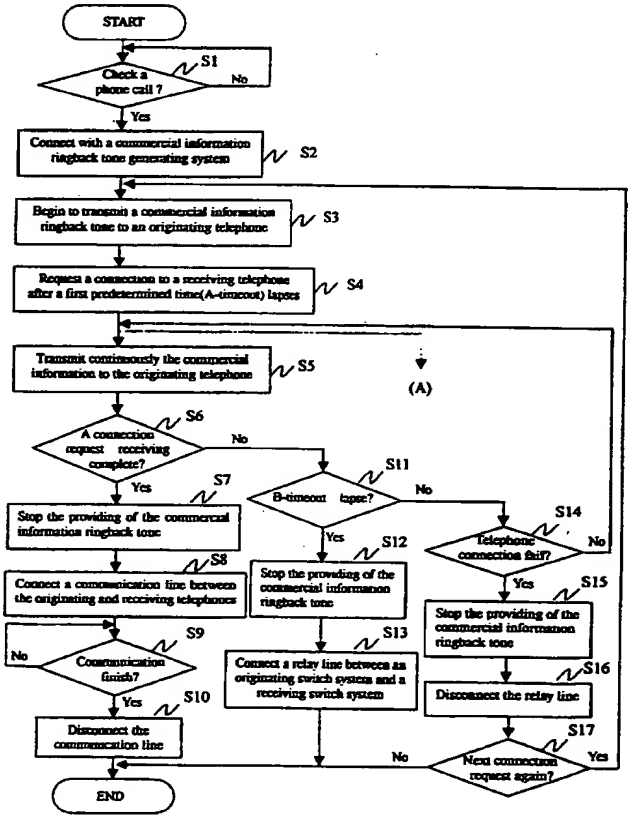
(81) Designated States *(national)*: AU, BR, CA, CN, JP, US.

(84) Designated States *(regional)*: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published:
— *Without international search report and to be republished upon receipt of that report.*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND DEVICE FOR GENERATING VOICE/TEXT/IMAGE COMMERCIAL INFORMATION RINGBACK TONE DURING COMMUNICATION WAIT



(57) Abstract: Voice/text/image commercial information generating method and device during a communication is on wait. The method includes the steps of: checking a telephone call, connecting with a commercial information ringback tone generating system/device at an originating or a receiving communication system when the call is detected, beginning to transmit a commercial information in forms of voice/text/image instead of the original ringback tone or a guide message to an originating telephone from the commercial information ringback tone generating system during a communication wait, requesting a connection to a receiving telephone from the commercial information ringback tone generating system after an A-timeout lapses, continuously transmitting the commercial information to the originating telephone, checking whether the receiving telephone accepts the connection request, stopping the providing of the commercial information ringback tone if the telephone connection is made, connecting a communication line between the originating and the receiving telephones, checking whether the communication is finished, and disconnecting the communication line if the communication finishes.

WO 01/06735 A2

METHOD AND DEVICE FOR GENERATING VOICE/TEXT/IMAGE COMMERCIAL INFORMATION RINGBACK TONE DURING COMMUNICATION WAIT

TECHNICAL FIELD

The present invention relates to a method and a device for generating a commercial information ringback tone such as advertisements, music or news during a communication wait, and more particularly to a method and a device for generating voice/text/image commercial information ringback tone during the communication is on wait in which when a telephone caller calls upon a telephone receiver or upon any type of automatic response application systems(ARS, VMS, VISS, PPS) by using ordinary telephones, mobile telephones(CDMA, PCS, TDMA, GSM, AMPS, IMT-2000), video telephones, satellite telephones or internet telephones, the caller can hear and see by providing into the caller's telephone various commercial information such as advertisements, music or news in forms of voice, text or image instead of the waiting signal sound through the telephone.

BACKGROUND ART

In general, when a telephone caller by using ordinary telephones or mobile telephones calls a particular company

or a subscriber service center by phone, he or she can hear the commercial advertisements. These advertisements have been very effective since they naturally flow out during the communication wait. In a conventional art, during the communication is on wait, messages such as "hold on for a while', and "other communication is still going on" are repetitively generated to the caller's phone. Recently, a particular service system for some mobile telephones provides voice type advertisements to the caller's phone.

When an user makes a phone call, the user can be provided the advertisements instead of the waiting signal sound or the repeating voice ment informed by a particular service, relax a tiresome state and also can get a telephone charge discount.

Recently, at pharmacies or restaurants provide free call service for the clients. In the free call service, upon hearing advertisements for 10 to 15 seconds, the clients can use the telephone for free.

However, in the conventional free call service, the user must call to the advertisement company at first, hear the advertisement and then input the number he wants to. So, there is a problem that can be happened time consuming and inconvenient aspects.

DISCLOSURE OF THE INVENTION

The object of the present invention is to overcome the

above described problem and is to provide a method for generating a voice/text/image commercial information ringback tone through which the telephone originator can hear and see advertisements, music and news in the form of voice, text or image with the background music, and through which the communication company can have the benefit made by providing the commercial information and the advertisement company can maximize the advertisement productivity.

Another object of the invention is to provide an information generating device during the communication wait to achieve the above described method.

To achieve the first object, there is provided a method for generating a voice/text/image commercial information ringback tone through a communication system including a call process function carrying out a transfer of a commercial information to an originating telephone instead of a ringback tone or a guide message during a communication wait till a receiving side is received after the calling from the originating telephone of a subscriber to a receiving side(a receiving telephone of a subscriber or a receiving communication system)is completed, the method comprising the steps of: checking a telephone call(S1), connecting with an information generating device(hereinafter, a commercial information ringback tone generating system/device) at an originating or a receiving communication system when the call is detected(S2), beginning to transmit a commercial information to an

originating telephone from the commercial information ringback tone generating system in at least one form of a voice, a text, and/or an image, during a communication wait(S3), requesting a connection to a receiving telephone from the commercial information ringback tone generating system when a first predetermined time(A-timeout) lapses(S4),and continuously transmitting the commercial information to the originating telephone(S5); checking whether the receiving telephone accepts the connection request(S6), checking whether a second predetermined time(B-timeout) lapses since the commercial information ringback tone is provided if the connection request is not accepted(S11), checking whether a telephone connection fails if within the second predetermined time(B-timeout)(S14) and continuously providing the commercial information ringback tone to the originating telephone if the telephone connection does not fail(S5); stopping the providing of the commercial information ringback tone if the telephone connection is made in the step S6(S7), connecting a communication line between the originating telephone and the receiving telephone(S8), checking whether the communication is finished(S9), and disconnecting the communication line if the communication finishes(S10); stopping the sending of the commercial information ringback tone if the second predetermined time(B-timeout) lapses since the connection request in the step S11(S12), and connecting a relay line between an originating switch and a receiving switch(S13); and stopping the sending of the

commercial information ringback tone if the connection request fails(S15), releasing the relay line between the originating switch and the receiving switch(S16), checking whether a next connection request is(S17), and beginning to transmit the commercial information to the originating telephone from the commercial information ringback tone generating system(S3).

The method further includes the steps of requesting the connection to the receiving telephone after the first predetermined time(A-timeout) lapses in the step S4, stopping the sending of the commercial information ringback tone and beginning to transmit an original ringback tone or the guide message to the originating telephone when a ringback tone hearing mode is set(S18), checking whether the receiving telephone accepts the request(S19), stopping the providing of the ringback tone of the guide message if the request is accepted(S20), connecting the communication line between the originating telephone and the receiving telephone(S21), checking whether the communication is finished(S22), and disconnecting the communication line between the originating telephone and the receiving telephone(S23).

To achieve the second object of the invention, there is provided an information generating device having a communication system including an originating telephone, a receiving telephone including an ordinary telephone, a mobile phone(CDMA, PCS, TDMA, GSM, AMPS, IMT-2000 type etc), a video phone, a satellite phone, an internet phone

etc a subscriber communication line and a relay communication line which are positioned in a switch system, the device comprising: a commercial information server for providing commercial information including advertisement, music, composite information(news, weather, sports, stock information, humor, entertainment etc), subscriber information(bio-rhythm, fortune, position, entertainer information, stock, fee information etc); a voice/text/image commercial information ringback tone generating device for providing a commercial information ringback tone in forms of a voice, a text, or an image from the commercial information server to the originating telephone which is on communication wait through the subscriber communication line, the voice/text/image commercial information Ringback tone generating device being provided in the switch system; a voice/text/image commercial information ringback tone generating system for providing a commercial information ringback tone in forms of a voice, a text, or an image from the server to the originating telephone which is on wait through the relay communication line and the subscriber communication line, the voice/text/image/commercial information ringback tone generating system being provided outside of the switch system; and a subscriber's private information server for providing a subscriber's private information individually in terms of regions, gender, ages and time bands, the commercial information ringback tone is provided depending on the subscriber's private information.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG.1 is a block diagram of a system providing voice/text/image commercial information ringback tone service.

FIG.2 is a flow chart for illustrating a voice/text/image commercial information providing method during a communication wait according to the present invention.

FIG.3 is a flow chart for illustrating the method to generate an original ringback tone after the voice/text/image commercial information is provided during a communication wait.

FIG.4 is a connection diagram between systems using commercial information ringback tone generating system at an originating switch system such as switch, PABX etc.

FIG.5a shows a commercial information ringback tone generating procedure in case where the commercial information Ringback tone generating system is used as a toll station at the originating switch system according to a first embodiment of the invention.

FIG.5b shows a commercial information ringback tone generating procedure in case where the commercial information ringback tone generating system is used as an end station at the originating switch system according to a first embodiment of the invention.

FIG.6 is a connection diagram between systems using

the commercial information ringback tone generating system in the originating switch system.

FIG.7 shows a commercial information ringback tone generating procedure by the commercial information ringback tone generating device in the originating switch system in accordance with a second embodiment of the invention.

FIG.8 is a system connection diagram using commercial information ringback tone generating system at a receiving switch system.

FIG.9a shows a commercial information ringback tone generating procedure in case where the commercial information ringback tone generating system is utilized as a toll station at the receiving switch system according to a third embodiment of the invention.

FIG.9b shows a commercial information ringback tone generating procedure in case where the commercial information ringback tone generating system is set as an end station at the receiving switch system according to a third embodiment of the invention.

FIG.10 is a system connection diagram using the commercial information ringback tone generating device in the receiving switch system.

FIG.11 shows a commercial information ringback tone generating procedure using the commercial information ringback tone generating device in the receiving switch system in accordance with a fourth embodiment of the invention.

FIG.12 is a connection diagram between systems using

a commercial information announcement generating system.

FIG.13 shows a commercial information announcement generating procedure using a commercial information announcement generating system according to a fifth embodiment of the invention.

FIG.14 is a connection diagram between systems using a commercial information announcement generating device of an automatic response application system such as ARS, VMS, VISS(Voice Information Service System), PPS(PrePaid System) etc.

FIG.15 shows a commercial information announcement generating procedure using a commercial information announcement generating device in accordance with a sixth embodiment of the invention.

FIG.16 is a connection diagram between systems using the commercial information Ringback tone generating device on an intelligent network.

FIG.17 shows a commercial information ringback tone generating procedure using the commercial information ringback tone generating system on the intelligent network according to a seventh embodiment of the invention.

FIG.18 is a connection diagram between systems using a commercial information ringback tone generating device of an Intelligent Peripheral on the intelligent network.

FIG.19 shows a commercial information ringback tone generating procedure using a commercial information ringback tone generating device of the Intelligent Peripheral on the intelligent network according to a eighth

embodiment of the invention.

BEST MODE FOR CARRYING OUT THE INVENTION

Hereinafter, preferred embodiments of the present invention will be described with reference to the accompanying figures.

Referring to FIG. 1, which is a system construction diagram for providing a service using a telephone ringback tone having voice/text/image commercial information(advertisement, music, news, stock, weather information etc), the system includes an originating telephone 1 and a receiving telephone 4 including ordinary telephones, video telephones, mobile telephones, satellite telephones and internet telephones, a subscriber communication line 2 and a voice/text/image commercial information ringback tone generating device 3 in a switch system, a relay communication line 5, a voice/text/image commercial information ringback tone generating system 6 and a commercial information server 7, a subscriber's private information server 8 and a switch system 9 in a telephone office.

When a caller makes a call by the originating telephone 1, commercial information such as advertisement, music or news in forms of voice, text or image are provided to originating telephone 1 during a communication wait by commercial information providing server 7 which provides a

commercial information ringback tone including advertisement, music, composite information(news, weather, sports, stock evaluation, humor, entertainment) and a subscriber's private information(bio-rhythm, fortune, position, entertainer information, stock, fee etc) through the voice/text/image commercial information ringback tone generating system 6 installed outside of the switch system or the voice/text/image commercial information ringback tone generating device 3 installed inside the switch system.

The voice/text/image commercial information ringback tone generating device 3 in the switch system or the voice/text/image commercial information ringback tone generating system 6 stores the commercial information in forms of voice, music, text or image by the request of the commercial information provider such as advertisement company, broadcast station or stock company. When there is a call from the originating telephone 1, the commercial information are provided to the originating telephone 1 during communication wait from the voice/text/image commercial information ringback tone generating device 3 or the voice/text/image commercial information Ringback tone generating system 6 through the subscriber communication line 2.

FIG.2 is a flow chart for illustrating a method for providing the voice/text/image commercial information during the communication wait according to the present invention.

The method includes the steps of checking a telephone call(S1), connecting with an information generating device(hereafter, a commercial information ringback tone generating system/device) at an originating or a receiving communication system when the call is detected(S2), beginning to transmit a commercial information such as advertisement, music, news, weather, sports, stock evaluation, humor, bio-rhythm, fortune, entertainment, position, fee in at least one form of a voice, or a text, or an image, or a voice and a text, or a voice and an image, or a text and an image, or a voice and a text and an image instead of the original ringback tone or the guide message to an originating telephone from the commercial information ringback tone generating system during a communication wait(S3), requesting a connection to a receiving telephone from the commercial information ringback tone generating system after a first predetermined time(A-timeout) lapses(S4), and continuously transmitting the commercial information to the originating telephone(S5).

The method further includes the steps of: checking whether the receiving telephone accepts the connection request(S6), checking whether a second predetermined time(B-timeout) lapses since the commercial information ringback tone is generated if the connection request is not accepted(S11), checking whether a telephone connection fails if it is within the second predetermined time(S14) and continuously providing the commercial information

ringback tone to the originating telephone if the telephone connection does not fail(S5).

The method further includes the steps of: stopping the providing of the commercial information ringback tone if the telephone connection is made in the step S6(S7), connecting a communication line between the originating telephone and the receiving telephone(S8), checking whether the communication is finished(S9), and disconnecting the communication line if the communication finishes(S10).

The method further includes the steps of: stopping the sending of the commercial information ringback tone if the second predetermined time(B-timeout) lapses since the connection request begins in the step S11(S12), and connecting a relay line between an originating switch system and a receiving switch system(S13).

The method further includes the steps of: stopping the sending of the commercial information ringback tone if the connection request fails(S15), releasing the relay line between the originating switch system and the receiving switch(S16), checking whether a next connection request is(S17), and beginning to transmit the commercial information to the originating telephone from the commercial information ringback tone generating system(S3).

Referring to FIG.3, when a ringback tone hearing mode is set, the method further comprises the steps of requesting a connection to the receiving telephone after the first predetermined time(A-timeout) lapses in the step S4, stopping the sending of the commercial information

ringback tone and transmitting an original ringback tone to the originating telephone(S18), checking whether the receiving telephone accepts the request(S19), stopping the providing of the ringback tone if the request is accepted(S20), connecting the communication line between the originating telephone and the receiving telephone(21), checking whether the communication is finished(S22), and disconnecting the communication line between the originating telephone and receiving telephone(S23).

FIG.4 is a connection diagram between systems using the commercial information ringback tone generating system at the originating switch system. The originating switch system includes a switch, PABX and other switch.

FIG.5a illustrates a commercial information ringback tone generating procedure in case where the commercial information ringback tone generating system is used as a toll station at the originating switch system in accordance with a first embodiment of the invention.

The first embodiment includes the steps of: requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the originating switch system(2) when the originating telephone makes a call to the originating switch system(1), confirming the connection from the commercial information ringback tone generating system by sending an address complete message(ACM) to the originating switch system(3), replying a receiver connection by sending an answer message(ANM) from the commercial information

ringback tone generating system to the originating switch system in case of a charged ringback tone type(3-1), transmitting the commercial information ringback tone(advertisement, music, news, stock, weather, fortune and so on) from the commercial information ringback tone generating system to the originating telephone, stopping the commercial information ringback tone when the communication connection fails after the second predetermined time(B-timeout) lapses(4).

The method further includes the steps of: requesting a connection for a receiving telephone to a receiving switch system from the commercial information ringback tone generating system by sending the initial address message(IAM) after the first predetermined time(A-timeout) lapses(5) since the beginning of the commercial information transmission, confirming the connection from the receiving switch system by sending the address complete message(ACM) to the commercial information ringback tone generating system(6), ringing the receiving telephone from the receiving switch system(7), sending a call progress message(CPG) from the receiving switch system to the commercial information ringback tone generating system(8), answering(10) a receiving telephone connection to the commercial information ringback tone generating system from the receiving switch system by sending an answer message(ANM) when a receiver receives a call the receiving telephone(9), answering the receiving telephone connection to the originating switch system from the commercial

information ringback tone generating system by stopping the sending of the commercial information ringback tone and sending the answer message(ANM) in case of free ringback tone type(11), and stopping the sending of the commercial information ringback tone to the originating switch system from the commercial information ringback tone generating system in case of the charged ringback tone type(11-1).

The method further includes the steps of: connecting the communication line between the originating telephone and the receiving telephone(12).

The method further includes the steps of: requesting(14) a release to the commercial information ringback tone generating system from the originating switch system by sending a release message(REL) when the originator is disconnected(13), confirming the release to the originating switch system from the commercial information ringback tone generating system by sending a release complete message(RLC)(15), requesting a release to the receiving switch system from the commercial information ringback tone generating system by sending a release message(REL)(16), confirming the release to the commercial information ringback tone generating system from the receiving switch system by sending a release complete message(RLC)(17), and finishing the communication by disconnecting the receiving telephone from the receiving switch system(18).

FIG.5b shows the procedure for generating commercial information ringback tone in a case where the commercial

information ringback tone generating system is used as an end station in the originating switch system according to the first embodiment of the invention.

The method includes the steps of: requesting(2-1) a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the originating switch system when the originating telephone makes a call to the originating switch system(1-1), confirming the connection from the commercial information ringback tone generating system by sending an address complete message(ACM) to the originating switch system(3-1), replying(3-2) a receiver connection from the commercial information ringback tone generating system to the originating switch system by sending an answering message(ANM) in case of the charged ringback tone type.

The method further includes the steps of: transmitting the commercial information ringback tone(advertisement, music, news, stock, weather, fortune and so on) from the commercial information ringback tone generating system to the originating telephone, stopping(4-1) the commercial information ringback tone when the connection fails after the second predetermined time(B-timeout) lapses.

The method further includes the steps of: requesting a connection for a receiving telephone to a receiving switch from the originating switch system by sending the initial address message(IAM) after the first predetermined time(A-timeout) lapses(5-1) since the beginning of the

commercial information transmission, confirming the connection from the receiving switch system by sending the address complete message(ACM) to the originating switch system(6-1), ringing the receiving telephone from the receiving switch system(7-1), sending a call progress message(CPG) from the receiving switch system to the originating switch system(8-1). When a receiver receives a call with the receiving telephone(9-1), a receiver connection is done by replying(10-1) a receiving telephone connection to the originating switch system from the receiving switch system by sending an answer message(ANM), and requesting a stop of the commercial information ringback tone from the originating switch system by sending a release message to the commercial information ringback tone generating system(11-2).

The method further includes the steps of: confirming the release to the originating switch system from the commercial information ringback tone generating system by sending a release complete message(RLC)(11-3), connecting the communication line between the originating telephone and the receiving telephone(12-1) through the originating and receiving switch systems.

When the originator disconnects the communication(13-1), the method further goes through the steps of: requesting a release to the receiving switch system from the originating switch system by sending a release message(REL)(14-1), confirming the release to the originating switch system from the receiving switch system

by sending a release complete message(RLC)(15-1),and finishing the communication by disconnecting the receiving telephone from the receiving switch system(16-1).

FIG.6 is a schematic diagram for illustrating a connection between systems using the commercial information ringback tone generating device in the originating switch system.

FIG.7 shows a procedure for generating the commercial information ringback tone in a case where the commercial information ringback tone generating device in the originating switch system is used according to a second embodiment of the invention.

The second embodiment includes the steps of: making a call the originating telephone to the originating switch system(21), requesting a connection to the commercial information ringback tone generating device from the originating switch system(22), and replying the connection from the commercial information ringback tone generating device to the originating switch system(23).

The method further includes the steps of: transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating device and when the connection fails after the second predetermined time(B-timeout) lapses, stopping the commercial information ringback tone(24).

The method further includes the steps of: requesting a connection to the receiving switch system by sending an initial address message(IAM) from the originating switch

system(25) after a first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission, confirming the connection to the originating switch system by sending an address complete message(ACM) from the receiving switch system(26), ringing the receiving telephone from the receiving switch system(27), sending a call progress message(CPG) from the receiving switch system to the originating switch system(28), replying a receiver connection(30) to the originating switch system by sending an answer message(ANM) from the receiving switch system when a receiver receives a call with the receiving telephone(29), and requesting a release of the commercial information ringback tone to the commercial information ringback tone generating device from the originating switch system(31).

The method further includes the steps of: connecting a communication line between the originating telephone and the receiving telephone(32).

The method further includes the steps of: requesting(34) a release to the receiving switch system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system(33), confirming the release to the originating switch system from the receiving switch system by sending a release complete message(RLC)(35), and finishing the communication by disconnecting the receiving telephone from the receiving

switch system(36).

FIG.8 is a schematic diagram for illustrating a connection between systems using the commercial information ringback tone generating device at the receiving switch system. The receiving switch system includes a switch, a PABX and other switches.

FIG.9a shows a procedure for generating the commercial information ringback tone in a case where the commercial information ringback tone generating system is utilized as a toll station outside of the receiving switch system according to a third embodiment of the present invention.

The third embodiment includes the steps of: making a call the originating telephone to the originating switch system(41), requesting a connection to the receiving switch system by sending an initial address message(IAM) from the originating switch system(42), requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the receiving switch system(43), confirming the connection from the commercial information ringback tone generating device to the receiving switch system by sending an address complete message(ACM)(44), confirming the connection to the originating switch system by sending an ACM from the receiving switch system(45), replying a connection to the receiving switch system from the commercial information ringback tone generating system by sending an answering message(ANM)(45-1), and replying a connection to the

originating switch system from the receiving switch system by sending an answer message(ANM)(45-2).

The method further includes the steps of: transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating system, and when the connection fails after the B-timeout lapses, stopping the commercial information ringback tone(46).

The method further includes the steps of: requesting a connection to the receiving switch system by sending an initial address message(IAM) from the commercial information ringback tone generating system after the first predetermined time(A-timeout) lapses since the beginning of the commercial information Ringback tone transmission(47), confirming the connection to the commercial information ringback tone generating system by sending an address complete message(ACM) from the receiving switch system(48), ringing the receiving telephone from the receiving switch system(49), sending a call progress message(CPG) from the receiving switch system to the commercial information ringback tone generating system(50), replying a receiver connection(52) to the commercial information ringback tone generating system by sending an answer message(ANM) from the receiving switch system when a receiver receives a call with the receiving telephone(52). The method further goes through the steps of: stopping the commercial information ringback tone to the originating switch system from the commercial information ringback tone generating system and

replying a connection by sending an answer message(ANM)(53) in case of free ringback tone type, and stopping the commercial information ringback tone to the originating switch system from the commercial information ringback tone generating system in case of charged ringback tone type(53-1).

The method further includes the steps of: connecting a communication line between the originating telephone and the receiving telephone(54).

The method further includes the steps of: requesting a release(56) of the commercial information ringback tone to the commercial information ringback tone generating system from the originating switch system by sending a release message(REL) when the receiving telephone is disconnected from the originating switch system(55), and confirming the release to the originating switch system from the commercial information ringback tone generating system by sending a release complete message(RLC)(57).

The method further includes the steps of: requesting a release to the receiving switch system from the commercial information ringback tone generating system by sending a release message(REL)(58), confirming the release to the commercial information ringback tone generating system from the receiving switch system by sending a release complete message(RLC)(59), and finishing the communication by disconnecting the receiving telephone from the receiving switch system(60).

FIG.9b shows a procedure for generating the

commercial information ringback tone in a case where the commercial information ringback tone generating system is set as an end station outside of the receiving switch system according to the third embodiment of the present invention.

The method further comprises the steps of: making a call to the originating switch system by using the originating telephone(41-1), requesting a connection to the receiving switch system by sending an initial address(IAM) message from the originating switch system(42-1), requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the receiving switch system(43-1), confirming a connection from the commercial information ringback tone generating system to the receiving switch system by sending an address complete message(ACM)(44-1), confirming a connection from the receiving switch system to the originating switch system by sending an address complete message(ACM)(45-3).

The method further goes through the steps of: replying a receiver connection to the receiving switch system from the commercial information ringback tone generating system by sending an answer message(ANM)(45-4) in case of charged ringback tone type, and replying a receiver connection to the originating switch system from the receiving switch system by sending an answering message(ANM)(45-5).

The method further goes through the steps of: transmitting the commercial information ringback tone to

the originating telephone from the commercial information ringback tone generating system, and when the connection fails after the B-timeout lapses, stopping the commercial information ringback tone(46-1).

The method further goes through the steps of: requesting a release and requesting a stop of the commercial information ringback tone to the commercial information ringback tone generating system from the receiving switch system(49-1) by sending a release message(REL) when the receiving telephone ringing(47-1) and a receiver receives a call with the receiving telephone(48-1) after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission.

The method further goes through the steps of: confirming a release to the receiving switch system by sending a release complete message(RLC) from the commercial information ringback tone generating system(50-1) and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the receiving switch system in case of free ringback tone type(51-1).

The method further goes through the steps of: connecting the communication line between the originating telephone and the receiving telephone(52-1).

The method further goes through the steps of: requesting a release(54-1) to the receiving switch system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected

from the originating switch system(53-2), confirming the release to the originating switch system from the receiving switch system by sending a release complete message(RLC)(55-1), and finishing the communication by disconnecting the receiving telephone from the receiving switch system(56-1).

FIG.10 is a schematic diagram for illustrating a connection between systems using the commercial information ringback tone generating device in the receiving switch system.

FIG.11 shows a procedure for generating the commercial information ringback tone in a case where the commercial information ringback tone generating system in the receiving switch system is adapted according to a fourth embodiment of the present invention.

The fourth embodiment includes the steps of: making a call to the originating switch system by using the originating telephone(61), requesting a connection to the receiving switch system by sending an initial address message from the originating switch system(62),confirming the connection to the originating switch system by sending an address complete message(ACM) from the receiving switch system(63), requesting a connection to the commercial information ringback tone generating device from the receiving switch system(64), replying the connection to the receiving switch system from the commercial information ringback tone generating device(65), and answering a connection to the originating switch system from the

receiving switch system by sending an answer message(ANM)(65-1) in case of charged ringback tone type.

The method further includes the steps of: transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating system in the receiving switch system(66).

The method further includes the steps of: sending a call progress message(CPG)(68) to the originating switch system from the receiving switch system when the receiving telephone rings(67) after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission, requesting a stop of the commercial information ringback tone to the commercial information ringback tone generating device from the receiving switch system(70) when a receiver receives a call with the receiving telephone(69). The method further includes the steps of: replying a receiver connection to the originating switch system from the receiving switch system by sending an answer message(ANM) in case of free ringback tone type(70-1).

The method further includes the steps of: connecting the communication line between the originating telephone and receiving telephone(71), requesting a release(73) to the receiving switch system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system(72), confirming the release to the originating switch system from the receiving switch system

by sending a release complete message(RLC)(74), and finishing the communication by disconnecting the receiving telephone from the receiving switch system(75).

FIG.12 is a schematic diagram for illustrating a connection between systems using the commercial information announcement generating system.

FIG.13 shows a procedure for generating the commercial information announcement using the commercial information announcement generating system according to a fifth embodiment of the present invention.

The fifth embodiment includes the steps of: requesting a connection(82) to the commercial information announcement generating system from the originating switch system by sending an initial address message(IAM) when the originating telephone makes a call to the originating switch system(81), confirming the connection to the originating switch system by sending an address complete message(ACM) from the commercial information announcement generating system(83), and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the commercial information announcement generating system in case of charged announcement type(83-1).

The method further includes the steps of: transmitting the commercial information announcement(advertisement, music, news, stock, weather, fortune and so on) from the commercial information announcement generating system to the originating telephone and stopping the commercial

information announcement when the communication connection fails after the second predetermined time(B-timeout) lapses(84).

The method further includes the steps of: requesting a connection(85) to the receiving switch system or an automatic response application system(ARS, VMS etc) from the commercial information announcement generating system by sending an initial address message(IAM) after the first predetermined time(A-timeout) lapses since the beginning of the commercial information announcement transmission, confirming the connection to the commercial information announcement generating system by sending an address complete message(ACM) from the receiving switch system(86), sending a call progress message(CPG) to the commercial information announcement generating system from the receiving switch system or the automatic response application system(88) after the receiving telephone rings(87), and when a receiver receives a call with the receiving telephone(89), replying a receiver connection to the commercial information announcement generating system from the receiving switch system or the automatic response application system(90).

The method further includes the steps of: replying a receiver connection to the originating switch system from the commercial information announcement generating system by stopping the commercial information announcement and sending an answer message(ANM) in case of free of charge announcement type(91), stopping the commercial information

announcement in case of charged announcement type(91-1).

The method further includes the steps of: connecting the communication line between the originating telephone and the receiving telephone(92).

The method further includes the steps of: requesting a release(94) to the commercial information announcement generating system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system(93), confirming the release to the originating switch system from the commercial information announcement generating system by sending a release complete message (RLC)(95).

The method further includes the steps of: requesting a release to the receiving switch system or the automatic response application system by sending a release message (REL) from the commercial information announcement generating system(96), confirming the release to the commercial information announcement generating system from the receiving switch system by sending a release complete message(RLC)(97), and finishing the communication by disconnecting the receiving telephone from the receiving switch system or the automatic response application system(98).

FIG.14 is a schematic diagram for illustrating a connection between systems using the commercial information announcement generating system of an automatic response application system. The automatic response

application system includes an ARS(Automatic Response system), a VISS(Voice Information Service System), PPS(PrePaid System) etc. The commercial information announcement includes advertisements, music, news, stock, weather etc.

FIG.15 shows a procedure for generating the commercial information announcement using the commercial information announcement generating device of the automatic response application system according to a sixth embodiment of the invention.

Referring to FIG.15, the commercial information announcement is generated by using the commercial information announcement generating device of the automatic response application system including a voice/text/image commercial information announcement device and an automatic response applied device.

The sixth embodiment includes the steps of: requesting a connection(102) to the automatic response application system from the originating switch system by sending an initial address message(IAM) when the originating telephone makes a call to the originating switch system(101), confirming the connection to the originating switch system by sending an address complete message(ACM) from the automatic response application system(103), requesting a connection to the commercial information announcement generating device from the automatic response application system(104), replying a connection to the automatic response application system from the commercial information

announcement generating device(105), and replying a receiver connection to the originating switch system by sending an answer message from the automatic response application system in case of charged announcement type(105-1).

The method further goes through the steps of: transmitting the commercial information announcement from the commercial information announcement generating device to the originating telephone(106) and requesting a stop of the commercial information announcement after the first predetermined time(A-timeout) lapses(107).

The method further goes through the steps of: requesting a connection to an automatic response applied device from the automatic response application system(108), replying a connection to the automatic response applied system from the automatic response applied device(109), and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the automatic response application system in case of free announcement type(109-1).

The method further goes through the steps of: connecting a communication line between the originating telephone and the automatic response applied device(110).

The method further goes through the steps of: requesting a release(112) to the automatic response application system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch

system(111), confirming the release to the originating switch system from the automatic response application system by sending a release complete message(RLC)(113), and disconnecting the automatic response applied device from the automatic response application system(114).

FIG.16 is a schematic diagram for illustrating a connection between systems using the commercial information ringback tone generating system on an intelligent network.

FIG.17 shows a procedure for generating the commercial information ringback tone using the commercial information ringback tone generating system on the intelligent network according to a seventh embodiment of the present invention.

The seventh embodiment includes the steps of: making a call the originating telephone to the originating switch system(120), requesting a connection to a service switching point(SSP) by sending an initial address message(IAM) from the originating switch system(121), requesting an analyzed information to a service control point(SCP) from the service switching point(SSP)(122), requesting a seize resource to the commercial information ringback tone generating system from the service control point(SCP)(123), returning the seize resource to the service control point from the commercial information ringback tone generating system(124), requesting a connect resource to the service switching point from the service control point(125), and requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the service switching point(126).

The method further goes through the steps of: confirming the connection to the originating switch system from the commercial information ringback tone generating system through the service switching point by sending an address complete message(ACM)(127), and answering a receiver connection to the originating switch system by sending an answer message from the service switching point in case of the charged ringback tone type(127-1).

The method further goes through the steps of: transmitting a commercial information ringback tone(advertisement, music, news, stock, weather, fortune etc) to the originating telephone from the commercial information ringback tone generating system(128).

The method further goes through the steps of: requesting an analyzed information return to the service switching point from the service control point after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission(129), requesting a connection to the receiving switch system by sending an initial address message from the service switching point(130), confirming the connection to the service switching point by sending an address complete message(ACM) from the receiving switch system(131), ringing the receiving telephone by the receiving switch system(132), sending a call progress message(CPG) to the service switching point from the receiving switch system(133). When a receiver receives a call with the receiving phone(134), the method goes through

the steps of: replying a receiver connection(135) to the service switching point by sending an answer message(ANM) from the receiving switch system, and stopping the commercial information ringback tone by sending a release message(REL) to the commercial information ringback tone generating system from the service switching point(136).

The method further goes through the steps of: replying a receiver connection to the originating switch system by sending an answer message(ANM) from the service switching point in case of free ringback tone type(137).

The method further goes through the steps of: connecting a communication line between the originating telephone and the receiving telephone(138).

The method further goes through the steps of: requesting a release(140) to the service switching point from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system(139), and confirming the release to the originating switch system from the service switching point by sending a release complete message(RLC)(141).

The method further goes through the steps of: requesting a release to the receiving switch system from the service switching point by sending a release message(REL)(142), confirming the release to the service switching point from the receiving switch system by sending a release complete message(RLC)(143), and finishing the communication by disconnecting the receiving telephone from

the receiving switch system(144).

When the SSP is utilized as an end switch, it works together with a voice communication switch device through interstation signal protocol(No.7, ISUP, R2MFC and so on), or when the SSP is utilized as a local switch, it works together with a voice communication switch device through IPC(Inter-Process Communication).

FIG.18 is a schematic diagram for illustrating a connection between systems using the commercial information ringback tone generating device in an IP(Intelligent Peripheral) on the intelligent network.

FIG.19 shows a procedure for generating the commercial information ringback tone using the commercial information ringback tone generating device in the IP on the intelligent network according to an eighth embodiment of the invention.

The eighth embodiment includes the steps of: connecting the originating telephone to the originating switch system(160), requesting a connection to a service switching point by sending an initial address message(IAM) from the originating switch system(161), requesting an analyzed information to a service control point(SCP) from the service switching point(SSP)(162), requesting a seize resource to the intelligent peripheral from the service control point(163), returning the seize resource to the service control point from the intelligent peripheral(164), requesting a connect resource to the service switching point from the service control point(165), and requesting

a connection to the intelligent peripheral by sending an initial address message(IAM) from the service switching point(166).

The method further goes through the steps of: confirming the connection to the originating switch system from the intelligent peripheral through the service switching point by sending an address complete message(ACM)(167), and answering a receiver connection to the originating switch system by sending an answer message(ANM) from the service switching point in case of charged ringback tone type(167-1).

The method further goes through the steps of: transmitting a commercial information Ringback tone to the originating telephone from the commercial information ringback tone generating system(168).

The method further goes through the steps of: requesting an analyzed information return to the receiving telephone after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission(169), requesting a connection to the receiving switch system by sending an initial address message from the service switching point(170), confirming the connection to the service switching point by sending an address complete message from the receiving switch system(171), ringing the receiving telephone by the receiving switch system(172), sending a call progress message to the service switching point from the receiving switch system(173). When a receiver operates the receiving

phone(174), the method goes on the steps of: answering a receiver connection to the service switching point from the receiving switch system by sending an answer message(175) and stopping the commercial information ringback tone by sending a release message to the intelligent peripheral from the service switching point(176).

The method further goes through the steps of: answering a receiver connection to the originating switch system by sending an answer message from the service switching point in case of free of charge ringback tone type(177).

The method further goes through the steps of: connecting a communication line between the originating and the receiving telephones(178).

The method further goes through the steps of: requesting a release to the service switching point from the originating switch system by sending a release message(REL)(180) when the originating telephone is disconnected from the originating switch system(179), and confirming the release to the originating switch system from the service switching point by sending a release complete message(RLC)(181).

The method further goes through the steps of: requesting a release to the receiving switch system from the service switching point by sending a release message(REL)(182), confirming the release to the service switching point from the receiving switch system by sending a release complete message(RLC)(183), and finishing the

communication by disconnecting the receiving telephone from the receiving switch system(184).

Although the present invention is explained by using the No. 7 ISUP(ISDN User Part) among the inter-station signal protocols, various signal protocols such as R2MFC, X. 25, TCP/IP, IPC and so on. (FIGs.5a, 5b, 7, 9a, 9b, 11, 13, 15, 17 and 19)

This invention makes a subscriber to hear the commercial information instead of the ringback tone and provides any kinds of charge discount. Thus, the subscriber can hear the music, musical advertisement, news, stock information instead of the boring ringback tone from the switch system during a communication wait.

In general, a caller can communicate with the receiver through a communication network by the ordinary telephones or mobile telephones. At this time, the commercial information such as advertisement, music, news, stock information instead of the ringback tone are generated and started from the time until the calling signal arrives on the receiver.

Recently, the corded telephone, the cordless telephone, auxiliary services such as ARS, VMS, VISS and PPS, and the telephone number help service are kinds of charged communication. However, when the invention is adapted, the communication charge discount or free of charge schedule can be given to the subscriber.

On the other hand, on the communication manage company' side, he can get a fee from the advertisement

provider and can provide the charged commercial information such as news, stock evaluations, music or the like so that an auxiliary benefit can be obtained and can be given a benefit users, communication company and advertisement provider by decreasing a communication fee.

The commercial information providing method according to the present invention can be adapted to communications between ordinary telephone, guide telephone, video telephone, mobile telephone, internet telephone, satellite telephone, or to the auxiliary services such as VMS, VISS or PPS(PrePaid Service).

Especially, in the case of the help service, the caller can wait while hearing the commercial information with music before he or she is connected to the counsellor.

In the case of the VMS(Voice Mailing Service), the subscriber can get through the voice mail box without any charge.

Communication connection methods includes those methods to call an ordinary phone number, to call the ordinary phone number by a pre-registered subscriber, and to call a special phone number, and system constructions for generating the commercial information ringback tone includes a device built-in-switch, a system built-out-switch and an intelligent network type, and protocols for connecting the commercial information ringback tone generating device, commercial information ringback tone generating system and the switch systems includes No.7 ISUP, R2MFC, IPC, X.25, TCP/IP, and

subscriber's information are classified into gender, age, region, time band, and earning.

INDUSTRIAL APPLICABILITY

As described above, the commercial information ringback tone generating method(a ringback service) and device according to the present invention can provide commercial information such as advertisement, music, news, stock information during a communication wait to the caller instead of the ordinary ringback tone so that the subscriber can relax a boring state, save the communication charge and hear the commercial information in forms of voice, text or image, and the communication company can get an additional benefit from providing the commercial information not only the communication charge even when the connection is failed, and finally the advertisement company can maximize the advertisement effect.

The present invention has been described in an illustrative manner, and it is to be understood the terminology used is intended to be in the nature of description rather than of limitation. Many modifications and variations of the present invention are possible in light of the above teachings. Therefore, it is to be understood that within the scope of the appended claims, the invention may be practiced otherwise than as specifically described.

WHAT IS CLAIMED IS:

1. A method for generating voice/text/image commercial information through a communication system including a call process function carrying out a transfer of a commercial information to an originating telephone instead of a ringback tone or a guide message during a communication wait till a receiving side is received after the calling from the originating telephone of a subscriber to a receiving side(a receiving telephone of a subscriber or a receiving communication system) is completed, the method comprising the steps of:

(a) checking a telephone call(S1), connecting with an information generating device(hereinafter, a commercial information ringback tone generating system/device) at an originating or a receiving communication system when the call is detected(S2), beginning to transmit a commercial information instead of the original ringback tone or the guide message to an originating side telephone from the commercial information ringback tone generating system in at least one form of a voice, a text, and/or an image during a communication wait(S3), requesting a connection to a receiving telephone from the commercial information ringback tone generating system after a first predetermined time(A-timeout) lapses(S4), and continuously transmitting the commercial information to the originating telephone(S5);

(b) checking whether the receiving telephone accepts the connection request(S6), checking whether a second predetermined time(B-timeout) lapses since the commercial information ringback tone is provided if the connection request is not accepted(S11), checking whether a telephone connection fails if within the second predetermined time(S14) and continuously providing the commercial information ringback tone to the originating telephone if the telephone connection does not fail(S5);

(c) stopping the providing of the commercial information ringback tone if the telephone connection is made in the step S6(S7), connecting a communication line between the originating telephone and the receiving telephone(S8), checking whether the communication is finished(S9), and disconnecting the communication line if the communication finishes(S10);

(d) stopping the sending of the commercial information ringback tone if the second predetermined time lapses since the connection request in the step S11(S12), and connecting a relay line between an originating switch system and a receiving switch system(S13); and

(e) stopping the sending of the commercial information ringback tone if the connection request fails(S15), releasing the relay line between the originating switch and the receiving switch(S16), checking whether a next connection request is(S17), and beginning to transmit the commercial information to the originating telephone from the commercial information ringback tone generating

system(S3).

2. The method as recited in claim 1, further comprising the steps of requesting the connection to the receiving telephone after the first predetermined time(A-timeout) lapses in the step S4, stopping the sending of the commercial information ringback tone and beginning to transmit an original ringback tone or the guide message to the originating telephone when a ringback tone hearing mode is set(S18), checking whether the receiving telephone accepts the request(S19), stopping the providing of the ringback tone or the guide message if the request is accepted(S20), connecting the communication line between the originating telephone and the receiving telephone(S21), checking whether the communication is finished(S22), and disconnecting the communication line between the originating telephone and receiving telephone.

3. The method as recited in claim 1, wherein in the step (a), when a subscriber calls a receiver's phone number by using an ordinary telephone, a mobile telephone including any one of CDMA, PCS, TDMA, GSM, AMPS, and IMT-2000 type telephones, a video telephone, a satellite telephone and an internet telephone, when a pre-registered subscriber calls the receiver's phone number by using the receiver's phone number, when a subscriber calls a special number, or a subscriber calls an automatic response application system(ARS(Automatic Response System),

VMS(Voice Mailing System), VISS(Voice Information Service System), PPS(PrePaid System) etc), the commercial information providing service sends the commercial information in forms of melody, advertisement ment or advertisement image to the originating telephone in at least one form of a voice like melody, a text like advertisement, and/or an image like advertisement image during a communication wait.

4. The method as recited in claim 1, further comprising the steps of:

in case where the commercial information ringback tone generating system is used as a toll station in the originating switch system,

requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the originating switch system when the originating telephone makes a call to the originating switch system, confirming the connection from the commercial information ringback tone generating system by sending an address complete message(ACM) to the originating switch system, replying a receiver connection by sending an answer message(ANM) from the commercial information ringback tone generating system to the originating switch system if a charged ringback tone type is set, transmitting the commercial information ringback tone from the commercial information ringback tone generating system to the originating telephone, stopping

the commercial information ringback tone when the communication connection fails after the second predetermined time(B-timeout) lapses;

requesting a connection for a receiving telephone to a receiving switch system from the commercial information ringback tone generating system by sending the initial address message(IAM) after the first predetermined time(A-timeout) lapses since the beginning of the commercial transmission, confirming the connection from the receiving switch system by sending the address complete message(ACM) to the commercial information ringback tone generating system, ringing the receiving telephone from the receiving switch system, sending a call progress message(CPG) from the receiving switch system to the commercial information ringback tone generating system, answering a receiving telephone connection to the commercial information ringback tone generating system from the receiving switch system by sending an answer message(ANM) when a receiver receives a call with the receiving telephone, answering the receiving telephone connection to the originating switch system from the commercial information ringback tone generating system by stopping the sending of the commercial information ringback tone and replying a receiver connection by sending the answer message in case of free ringback tone type, and stopping the sending of the commercial information ringback tone to the originating switch system from the commercial information ringback tone generating system in case of the charged ringback tone type;

connecting the communication line between the originating telephone and the receiving telephone; and

requesting a release to the commercial information ringback tone generating system from the originating switch system by sending a release message(REL) when the originator disconnects the communication, confirming the release to the originating switch system from the commercial information ringback tone generating system by sending a release complete message(RLC), requesting a release to the receiving switch system from the commercial information ringback tone generating system by sending a release message(REL), confirming the release to the commercial information ringback tone generating system from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

5. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone generating system is used as an end station in the originating switch system,

requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the originating switch system when the originating telephone makes a call to the originating switch system, confirming the connection from

the commercial information ringback tone generating system by sending an address complete message(ACM) to the originating switch system,

replying a receiver connection from the commercial information ringback tone generating system to the originating switch system by sending an answer message(ANM) in case of a charged ringback tone type;

transmitting the commercial information from the commercial information ringback tone generating system to the originating telephone, stopping the commercial information ringback tone when the communication connection fails after the second predetermined time(B-timeout) lapses;

requesting a connection for a receiving telephone to a receiving switch system from the originating switch system by sending the initial address message(IAM) after the first predetermined time(A-timeout) lapses since the beginning of the commercial information transmission, confirming the connection from the receiving switch system by sending the address complete message(ACM) to the originating switch system, ringing the receiving telephone from the receiving switch system, sending a call progress message(CPG) from the receiving switch system to the originating switch system, replying a receiving telephone connection to the originating switch system from the receiving switch system by sending an answer message(ANM) when a receiver receives a call with the receiving telephone, and requesting a stop of the commercial

information ringback tone from the originating switch system by sending a release message to the commercial information ringback tone generating system;

confirming the release to the originating switch system from the commercial information ringback tone generating system by sending a release complete message(RLC);

connecting the communication line between the originating telephone and the receiving telephone; and

requesting a release to the receiving switch system from the originating switch system by sending a release message(REL) when the originator disconnects the communication, confirming the release to the originating switch system from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

6. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone generating device in the originating switch system is used so as to generate commercial information ringback tone,

making a call to the originating switch system by using the originating telephone, requesting a connection to the commercial information ringback tone generating device from the originating switch system, and replying the

connection from the commercial information ringback tone generating device to the originating switch system;

transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating device and when the connection fails after the second predetermined time(B-timeout) lapses, stopping the commercial information ringback tone;

requesting a connection to the receiving switch system by sending an initial address message(IAM) from the originating switch system after a first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission, confirming the connection to the originating switch system by sending an address complete message(ACM) from the receiving switch system, ringing the receiving telephone from the receiving switch system, sending a call progress message(CPG) from the receiving switch system to the originating switch system, replying a receiver connection to the originating switch system by sending an answer message(ANM) from the receiving switch system when a receiver receives a call with the receiving telephone, and requesting a release of the commercial information ringback tone to the commercial information ringback tone generating device from the originating switch system;

connecting a communication line between the originating telephone and the receiving telephone; and

requesting a release to the receiving switch system

from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

7. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone generating device outside of the receiving switch system is used so as to generate commercial information ringback tone,

making a call to the originating switch system by using the originating telephone, requesting a connection to the receiving switch system by sending an initial address message(IAM) from the originating switch system, requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the receiving switch system, confirming the connection from the commercial information ringback tone generating device to the receiving switch system by sending an address complete message(ACM), confirming the connection to the originating switch system by sending an ACM from the receiving switch system, replying a connection to the receiving switch system from the commercial information ringback tone generating system by sending an

answer message(ANM), and replying a connection to the originating switch system from the receiving switch system by sending an answer message(ANM);

transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating system, and when the connection fails after the second predetermined time(B-timeout) lapses, stopping the commercial information ringback tone;

requesting a connection to the receiving switch system by sending an initial address message(IAM) from the commercial information ringback tone generating system after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission, confirming the connection to the commercial information ringback tone generating system by sending an address complete message(ACM) from the receiving switch system, ringing the receiving telephone from the receiving switch system, sending a call progress message(CPG) from the receiving switch system to the commercial information ringback tone generating system, replying a receiver connection to the commercial information ringback tone generating system by sending an answer message(ANM) from the receiving switch system when a receiver receives a call with the receiving telephone;

stopping the commercial information ringback tone to the originating switch system from the commercial information ringback tone generating system and replying a

connection by sending an answer message(ANM) in case of free ringback tone type, and stopping the commercial information ringback tone to the originating switch system from the commercial information ringback tone generating system in case of charged ringback tone type;

connecting a communication line between the originating telephone and the receiving telephone; and

requesting a release of the commercial information Ringback tone to the commercial information Ringback tone generating system from the originating switch system by sending a release message(REL) when the receiving telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the commercial information ringback tone generating system by sending a release complete message(RLC), requesting a release to the receiving switch system from the commercial information ringback tone generating system by sending a release message(REL), confirming the release to the commercial information ringback tone generating system from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

8. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone generating system is set as an end station outside of

the receiving switch system,

making a call to the originating switch system by using the originating telephone, requesting a connection to the receiving switch system by sending an initial address message(IAM) from the originating switch system, requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the receiving switch system, confirming a connection from the commercial information ringback tone generating system to the receiving switch system by sending an address complete message(ACM), confirming a connection from the receiving switch system to the originating switch system by sending an address complete message(ACM), replying a receiver connection to the receiving switch system from the commercial information ringback tone generating system by sending an answer message(ANM) in case of charged ringback tone type, and replying a receiver connection to the originating switch system from the receiving switch system by sending an answer message(ANM);

transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating system, and when the connection fails after the second predetermined time(B-timeout) lapses, stopping the commercial information ringback tone;

requesting a release and requesting a stop of the commercial information ringback tone to the commercial information ringback tone generating system from the

receiving switch system by sending a release message(REL) when the receiving telephone ringing and a receiver receives a call with the receiving telephone after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission;

confirming a release to the receiving switch system by sending a release complete message(RLC) from the commercial information ringback tone generating system and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the receiving switch system in case of free ringback tone type;

connecting the communication line between the originating telephone and the receiving telephone; and

requesting a release to the receiving switch system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

9. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone is generated through the commercial information ringback tone generating device in the receiving switch

system,

making a call to the originating switch system by using the originating telephone, requesting a connection to the receiving switch system by sending an initial address message(IAM) from the originating switch system, confirming the connection to the originating switch system by sending an address complete message(ACM) from the receiving switch system, requesting a connection to the commercial information ringback tone generating device from the receiving switch system, replying the connection to the receiving switch system from the commercial information ringback tone generating device, and answering a connection to the originating switch system from the receiving switch system by sending an answer message(ANM) in case of charged ringback tone type;

transmitting the commercial information ringback tone to the originating telephone from the commercial information ringback tone generating device in the receiving switch system;

sending a call progress message(CPG) to the originating switch system from the receiving switch system when the receiving telephone rings by the receiving switch system after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission from the commercial information ringback tone generating device to the originating telephone, requesting a stop of the commercial information ringback tone to the commercial information ringback tone generating

device from the commercial information ringback tone generating device when a receiver receives a call with the receiving telephone;

replying a receiver connection to the originating switch system from the receiving switch system by sending an answer message(ANM) in case of free ringback tone type;

connecting the communication line between the originating telephone and the receiving telephone; and

requesting a release to the receiving switch system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

10. The method as recited in claim 1, further comprising the steps of:

in a case where a commercial information announcement is provided by using commercial information announcement generating system,

requesting a connection to the commercial information announcement generating system from the originating switch system by sending an initial address message(IAM) when the originating telephone makes a call to the originating switch system, confirming the connection to the originating switch system by sending an address complete message(ACM)

from the commercial information announcement generating system, and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the commercial information announcement generating system in case of charged announcement type;

transmitting the commercial information announcement from the commercial information announcement generating system to the originating telephone and stopping the commercial information announcement when the communication connection fails after the second predetermined time(B-timeout) lapses;

requesting a connection to the receiving switch system or an automatic response application system(ARS, VMS etc) from the commercial information announcement generating system by sending an initial address message(IAM) after the first predetermined time(A-timeout) lapses since the beginning of the commercial information transmission, confirming the connection to the commercial information announcement generating system by sending an address complete message(ACM) from the receiving switch system or the automatic response application system, sending a call progress message(CPG) to the commercial information announcement generating system from the receiving switch system or the automatic response application system after the receiving switch telephone rings by the receiving switch system the receiving telephone, and when a receiver makes a call with the receiving telephone, answering a receiver connection to the

commercial information announcement generating system from the receiving switch system or the automatic response application system;

replying a receiver connection to the originating switch system from the commercial information announcement generating system by stopping the commercial information announcement and sending an answer message(ANM) in case of free of charge announcement type, stopping the commercial information announcement in case of charged announcement type;

connecting the communication line between the originating telephone and the receiving telephone; and

requesting a release to the commercial information announcement generating system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the commercial information announcement generating system by sending a release complete message(RLC), requesting a release to the receiving switch system or the automatic response application system by sending a release message(REL) from the commercial information announcement generating system, confirming the release to the commercial information announcement generating system from the receiving switch system or the automatic response application system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving

switch system or the automatic response application system.

11. The method as recited in claim 1, further comprising the steps of:

in a case where a commercial information announcement is provided by using commercial information announcement generating device and an automatic response applied device(ARS, VMS etc) in an automatic response application system,

requesting a connection to the automatic response application system from the originating switch system by sending an initial address message(IAM) when the originating telephone makes a call to the originating switch system, confirming the connection to the originating switch system by sending an address complete message(ACM) from the automatic response application system, requesting a connection to the commercial information announcement generating device from the automatic response application system, replying a connection to the automatic response application system from the commercial information announcement generating device, and replying a receiver connection to the originating switch system by sending an answer message from the automatic response application system in case of charged announcement type;

transmitting the commercial information announcement from the commercial information announcement generating device to the originating telephone and requesting a stop of the commercial information announcement after the first

predetermined time(A-timeout) lapses;

requesting a connection to an automatic response applied device including ARS or VMS etc from the automatic response application system, replying a connection to the automatic response applied system from the automatic response applied device, and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the automatic response application system in case of free of charge announcement type;

connecting a communication line between the originating telephone and the automatic response applied device; and

requesting a release to the automatic response application system from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the automatic response application system by sending a release complete message(RLC), and disconnecting the automatic response applied device from the automatic response application system.

12. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone is generated by using the commercial information ringback tone generating system in an intelligent network,

making a call the originating telephone to the

originating switch system, requesting a connection to a service switching point(SSP) by sending an initial address message(IAM) from the originating switch system, requesting an analyzed information to a service control point(SCP) from the service switching point, requesting a seize resource to the commercial information ringback tone generating system from the service control point, returning the seize resource to the service control point from the commercial information ringback tone generating system, requesting a connect resource to the service switching point from the service control point, and requesting a connection to the commercial information ringback tone generating system by sending an initial address message(IAM) from the service switching point;

confirming the connection to the originating switch system from the commercial information ringback tone generating system through the service switching point by sending an address complete message(ACM), and answering a receiver connection to the originating switch system by sending an answer message from the service switching point in case of charged ringback tone type;

transmitting a commercial information ringback tone to the originating telephone from the commercial information ringback tone generating system;

requesting an analyzed information return to the service switching point from the service control point after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone

transmission, requesting a connection to the receiving switch system by sending an initial address message(IAM) from the service switching point, confirming the connection to the service switching point by sending an address complete message(ACM) from the receiving switch system, ringing the receiving telephone by the receiving switch system, sending a call progress message(CPG) to the service switching point from the receiving switch system, replying a receiver connection to the service switching point by sending an answer message(ANM) from the receiving switch system when a receiver receives a call with the receiving phone, and stopping the commercial information ringback tone by sending a release message(REL) to the commercial information ringback tone generating system from the service switching point;

replying a receiver connection to the originating switch system by sending an answer message(ANM) from the service switching point in case of free of charge ringback tone type;

connecting the originating telephone and the receiving telephone; and

requesting a release to the service switching point from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the service switching point by sending a release complete message(RLC), requesting a release to the receiving switch system from

the service switching point by sending a release message(REL), confirming the release to the service switching point from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

13. The method as recited in claim 1, further comprising the steps of:

in a case where the commercial information ringback tone is generated by using the commercial information ringback tone generating device of the intelligent peripheral(IP) in an intelligent network,

connecting the originating telephone to the originating switch system, requesting a connection to a service switching point by sending an initial address message(IAM) from the originating switch system, requesting an analyzed information to a service control point(SCP) from the service switching point(SSP), requesting a seize resource to the intelligent peripheral(IP) from the service control point, returning the seize resource to the service control point from the intelligent peripheral, requesting a connect resource to the service switching point from the service control point, and requesting a connection to the intelligent peripheral by sending an initial address message(IAM) from the service switching point;

confirming the connection to the originating switch system from the intelligent peripheral through the service

switching point by sending an address complete message(ACM), and replying a receiver connection to the originating switch system by sending an answer message(ANM) from the service switching point in case of charged ringback tone type;

transmitting a commercial information ringback tone to the originating telephone from the commercial information ringback tone generating system;

requesting an analyzed information return to the receiving telephone after the first predetermined time(A-timeout) lapses since the beginning of the commercial information ringback tone transmission, requesting a connection to the receiving switch system by sending an initial address message(IAM) from the service switching point, confirming the connection to the service switching point by sending an address complete message(ACM) from the receiving switch system, ringing the receiving telephone by the receiving switch system, sending a call progress message(CPG) to the service switching point from the receiving switch system, answering a receiver connection to the service switching point from the receiving switch system by sending an answer message(ANM) when a receiver operates the receiving phone, and stopping the commercial information ringback tone by sending a release message to the intelligent peripheral from the service switching point;

answering a receiver connection to the originating switch system by sending an answer message from the service

switching point in case of free of charge ringback tone type;

connecting the originating telephone and the receiving telephone; and

requesting a release to the service switching point from the originating switch system by sending a release message(REL) when the originating telephone is disconnected from the originating switch system, confirming the release to the originating switch system from the service switching point by sending a release complete message(RLC), requesting a release to the receiving switch system from the service switching point by sending a release message(REL), confirming the release to the service switching point from the receiving switch system by sending a release complete message(RLC), and finishing the communication by disconnecting the receiving telephone from the receiving switch system.

14. The method as recited in claim 1, wherein a subscriber connection methods includes methods to make a call an ordinary phone number of normal subscriber, to make a call the ordinary phone number of the receiver by a pre-registered subscriber, and to call a special phone number, and system constructions for generating the commercial information ringback tone in forms of a voice, a text or an image includes a device built-in-switch type, a system built-out-switch type and an intelligent network type, and protocols for connecting the commercial

information ringback tone generating device, commercial information ringback tone generating system and the switch systems includes No.7 ISUP, R2MFC, IPC, X.25, TCP/IP etc, and subscriber's private information are classified into gender, age, region, time band, and earning and the originating telephone is provided from the commercial ringback tone generating system commercial information instead of an original ringback tone during a communication wait by selectively the subscriber's private information.

15. The method as recited in claim 1, wherein the commercial information excluding the ringback tone or the guide message includes at least one of advertisement, music, news, greeting information, weather, sports, stock, humor, entertainment, bio-rhythm, fortune, position, entertainer, fee information, and the subscriber includes at least one of wire communication subscribers or wireless communication subscribers such as mobile communication subscribers.

16. The method as recited in claim 1, wherein the communication system includes at least one of a wire communication system or a wireless communication system including a mobile communication system for communication between an originating side and a receiving side, the commercial information excluding the ringback tone or the guide message have at least one form of a voice form, a text form or an image form.

17. The method as recited in claim 1, wherein the call process function transmitting to the originating telephone of the subscriber the commercial information excluding the ringback tone or the guide message instead of the ringback tone during a communication wait, is applied to at least one of the patterns possible to be combined with an original ringback tone or an original guide message and the commercial information ringback tone, such as a first pattern for transmitting the commercial information to the originating telephone during a communication wait, a second pattern for transmitting the commercial information to the originating telephone after transmitting the ringback tone or the guide message with a fixed count during a communication wait, a third pattern for transmitting the ringback tone or the guide message to the originating telephone after transmitting the commercial information for a predetermined time during a communication wait, a fourth pattern for transmitting the ringback tone or the guide message to the originating telephone after transmitting the commercial information to the originating telephone for the predetermined time since the ringback tone or the guide message with a fixed count transmits during a communication wait, and a fifth pattern for simultaneously transmitting the ringback tone or the guide message and the commercial information ringback tone.

18. An information generating device having a

communication system including an originating telephone, a receiving telephone including an ordinary telephone, a mobile telephone(CDMA, PCS, TDMA, GSM AMPS, IMT-2000 type etc) a video phone, a satellite phone, an internet phone etc, a subscriber communication line and a relay communication line which are positioned in a switch system, the device comprising:

a commercial information server for providing commercial information including advertisement, music, composite information(news, weather, sports, stock information, humor, entertainment etc), subscriber information(bio-rhythm, fortune, position, entertainer information, stock, fee information etc);

a voice/text/image/commercial information ringback tone generating device for providing a commercial information ringback tone in forms of a voice, a text, or an image from the commercial information server to the originating telephone which is on wait through the subscriber communication line, the voice/text/image commercial information ringback tone generating device being provided in the switch system;

a voice/text/image commercial information ringback tone generating system for providing a commercial information ringback tone in forms of a voice, a text, or an image from the commercial information server to the originating telephone which is on wait through the relay communication line and the subscriber communication line, the voice/text/image commercial information ringback tone

generating system being provided outside of the switch system; and

a subscriber's private information server for providing subscriber's private information individually in terms of regions, gender, ages and time bands, the commercial information ringback tone is provided depending on the subscriber's private information.

19. An information generating device as recited in claim 18, wherein the device generates the commercial information in forms of the voice, the text or the image from an automatic response system(ARS), a voice mailing system(VMS), from a voice information service system(VISS) etc to an originating telephone of subscriber during communication wait.

FIG. 1

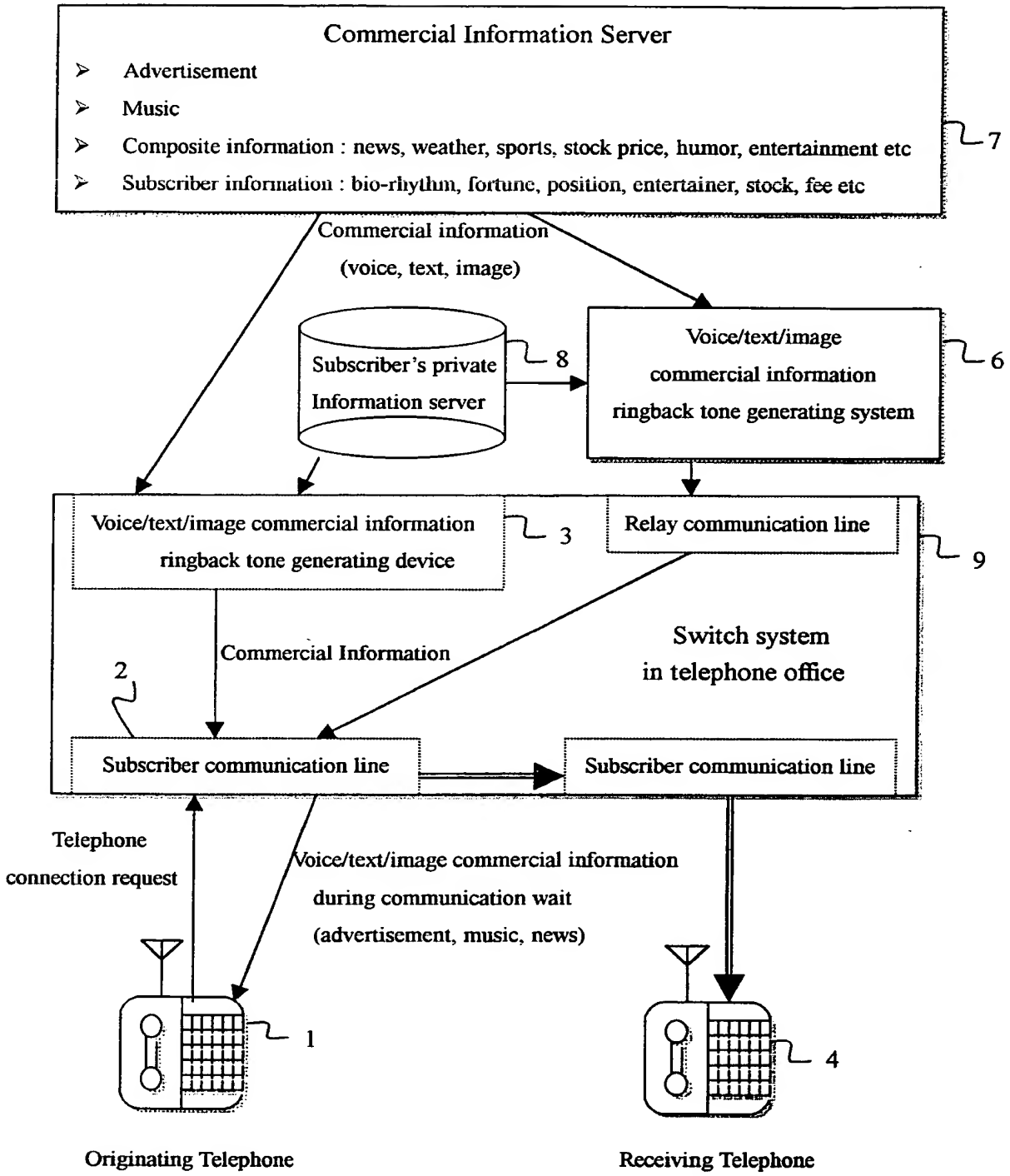

Commercial Information Server
Advertisement
Music
Composite information : news, weather, sports, stock price, humor, entertainment etc
Subscriber information : bio-rhythm, fortune, position, entertainer, stock, fee etc
7
Commercial information
(voice, text, image)
Subscriber's private
Information server
8
Voice/text/image
commercial information
ringback tone generating system
6
Voice/text/image commercial information
ringback tone generating device
3
Relay communication line
9
Commercial Information
2
Switch system
in telephone office
Subscriber communication line
Subscriber communication line
Telephone
connection request
Voice/text/image commercial information
during communication wait
(advertisement, music, news)
1
4
Originating Telephone
Receiving Telephone

FIG. 2

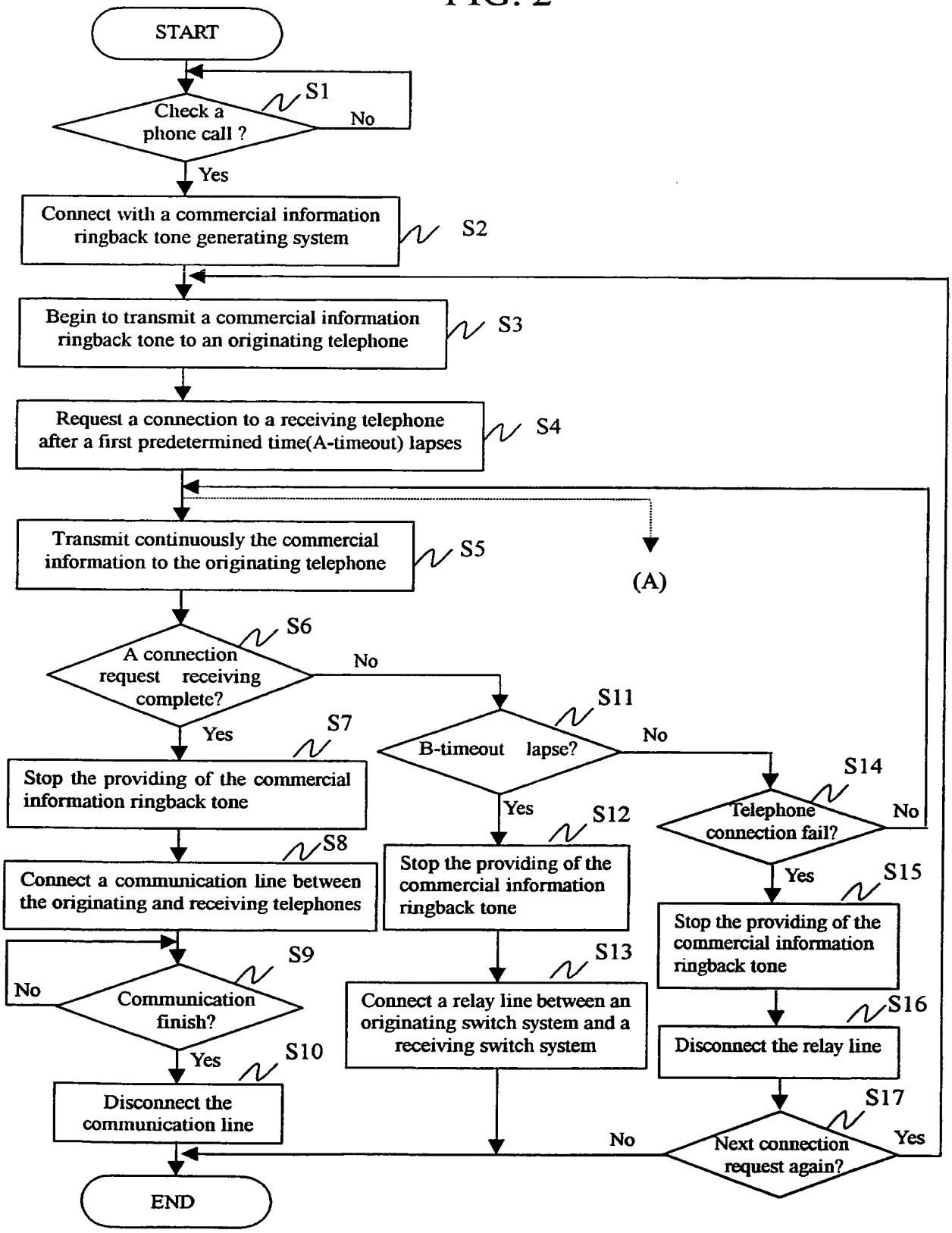

START
S1
Check a phone call ?
No
Yes
Connect with a commercial information ringback tone generating system
S2
Begin to transmit a commercial information ringback tone to an originating telephone
S3
Request a connection to a receiving telephone after a first predetermined time(A-timeout) lapses
S4
Transmit continuously the commercial information to the originating telephone
S5
(A)
S6
A connection request receiving complete?
No
Yes
S7
Stop the providing of the commercial information ringback tone
S8
Connect a communication line between the originating and receiving telephones
S9
No
Communication finish?
Yes
S10
Disconnect the communication line
END
S11
B-timeout lapse?
No
Yes
S12
Stop the providing of the commercial information ringback tone
S13
Connect a relay line between an originating switch system and a receiving switch system
S14
Telephone connection fail?
No
Yes
S15
Stop the providing of the commercial information ringback tone
S16
Disconnect the relay line
S17
Next connection request again?
Yes
No

FIG. 3

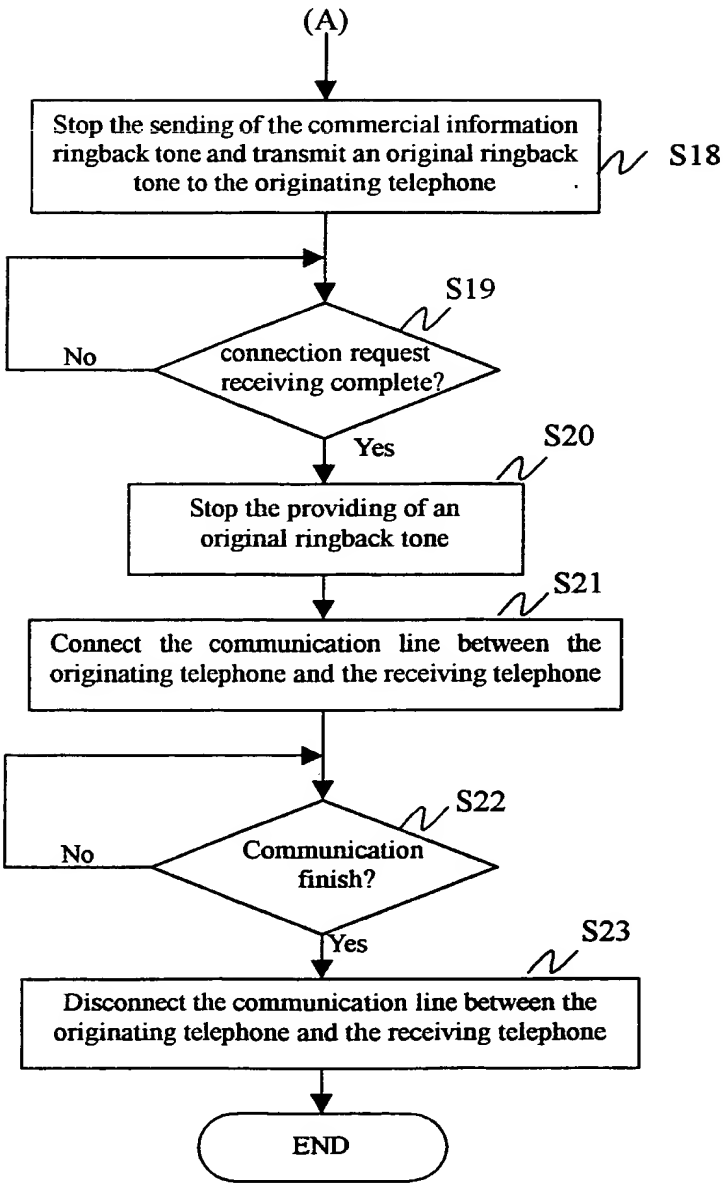

(A)
Stop the sending of the commercial information ringback tone and transmit an original ringback tone to the originating telephone
S18
S19
No
connection request receiving complete?
Yes
S20
Stop the providing of an original ringback tone
S21
Connect the communication line between the originating telephone and the receiving telephone
S22
No
Communication finish?
Yes
S23
Disconnect the communication line between the originating telephone and the receiving telephone
END

FIG. 4

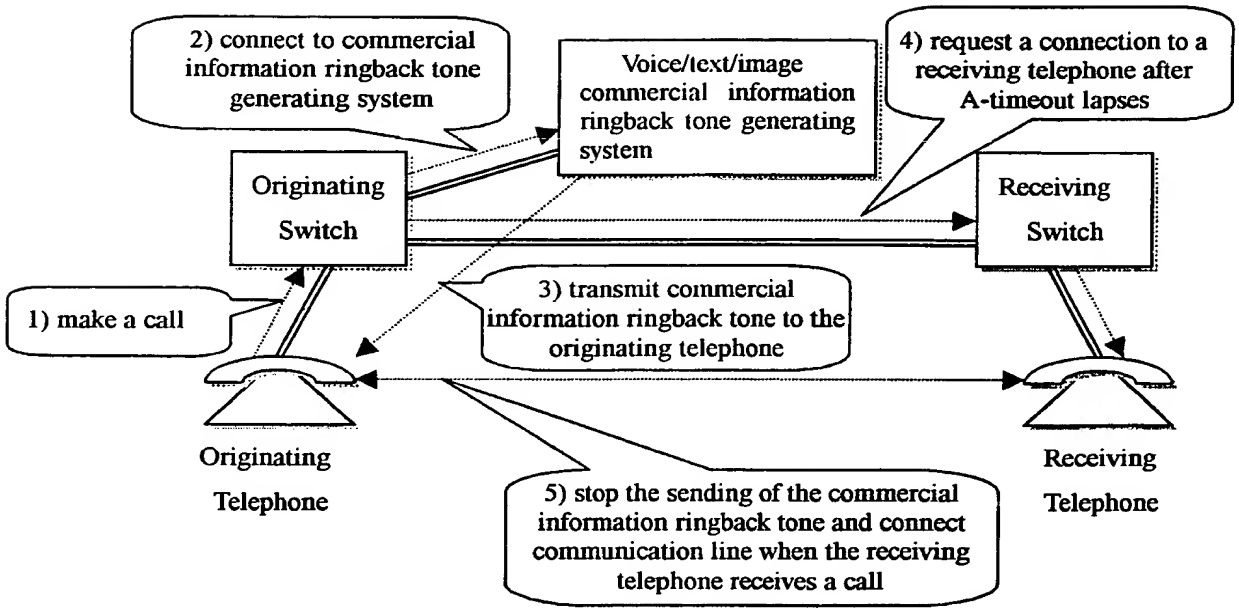

2) connect to commercial information ringback tone generating system
Voice/text/image commercial information ringback tone generating system
4) request a connection to a receiving telephone after A-timeout lapses
Originating Switch
Receiving Switch
1) make a call
3) transmit commercial information ringback tone to the originating telephone
Originating Telephone
Receiving Telephone
5) stop the sending of the commercial information ringback tone and connect communication line when the receiving telephone receives a call

FIG. 5a

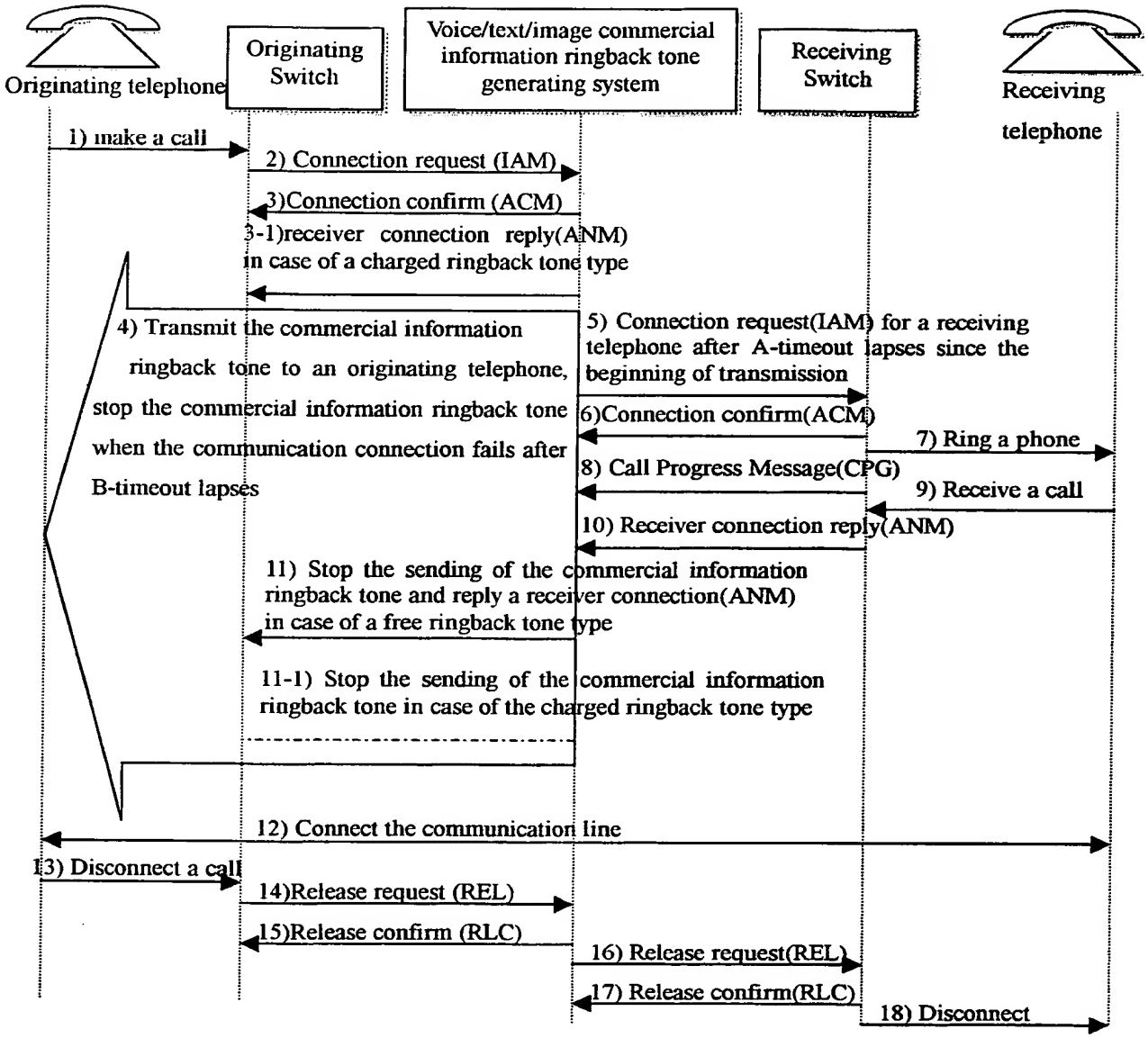

Originating telephone
Originating Switch
Voice/text/image commercial information ringback tone generating system
Receiving Switch
Receiving telephone
1) make a call
2) Connection request (IAM)
3)Connection confirm (ACM)
3-1)receiver connection reply(ANM) in case of a charged ringback tone type
4) Transmit the commercial information ringback tone to an originating telephone, stop the commercial information ringback tone when the communication connection fails after B-timeout lapses
5) Connection request(IAM) for a receiving telephone after A-timeout lapses since the beginning of transmission
6)Connection confirm(ACM)
7) Ring a phone
8) Call Progress Message(CPG)
9) Receive a call
10) Receiver connection reply(ANM)
11) Stop the sending of the commercial information ringback tone and reply a receiver connection(ANM) in case of a free ringback tone type
11-1) Stop the sending of the commercial information ringback tone in case of the charged ringback tone type
12) Connect the communication line
13) Disconnect a call
14)Release request (REL)
15)Release confirm (RLC)
16) Release request(REL)
17) Release confirm(RLC)
18) Disconnect

FIG. 5b

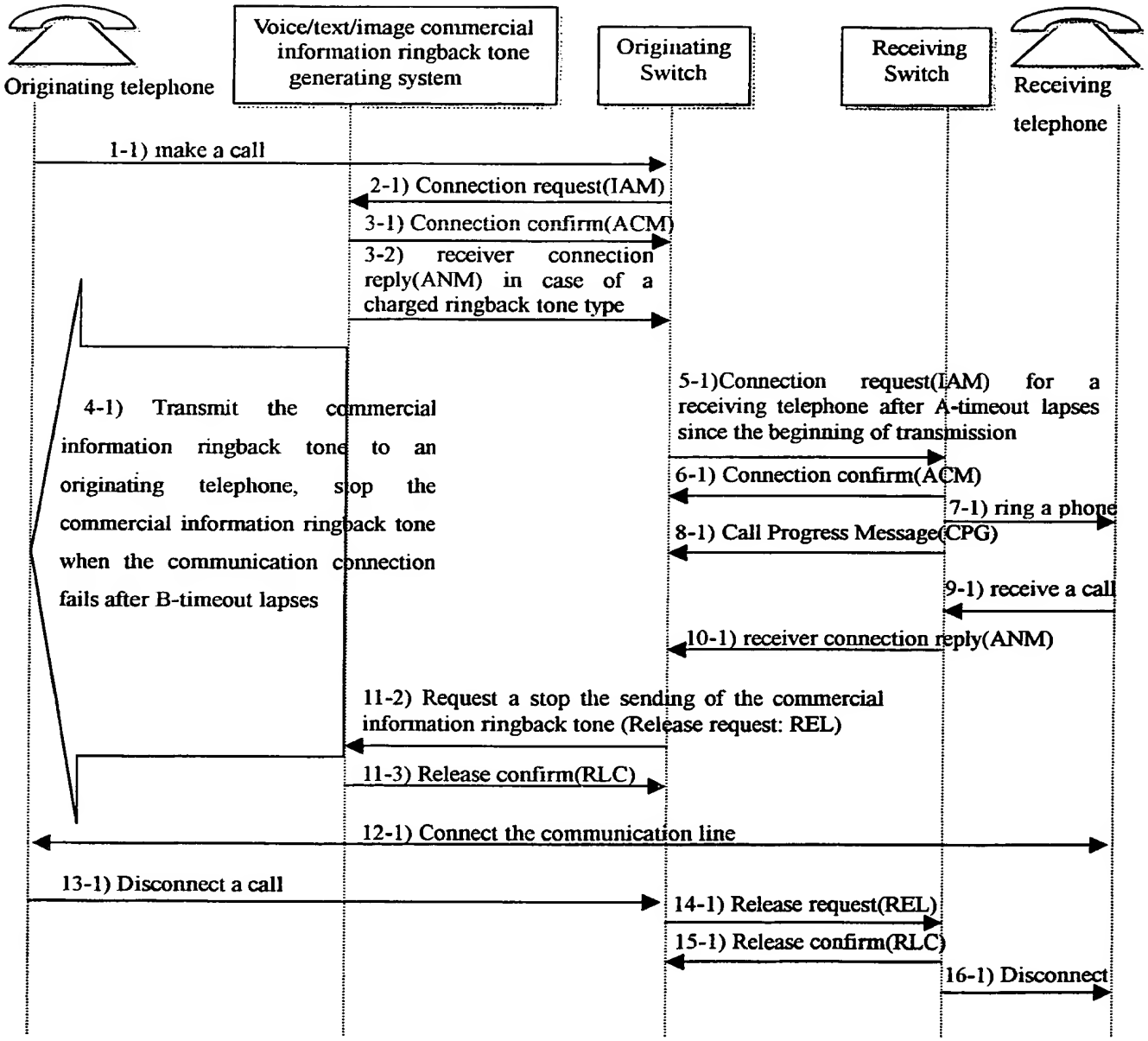

Originating telephone
Voice/text/image commercial information ringback tone generating system
Originating Switch
Receiving Switch
Receiving telephone
1-1) make a call
2-1) Connection request(IAM)
3-1) Connection confirm(ACM)
3-2) receiver connection reply(ANM) in case of a charged ringback tone type
4-1) Transmit the commercial information ringback tone to an originating telephone, stop the commercial information ringback tone when the communication connection fails after B-timeout lapses
5-1)Connection request(IAM) for a receiving telephone after A-timeout lapses since the beginning of transmission
6-1) Connection confirm(ACM)
7-1) ring a phone
8-1) Call Progress Message(CPG)
9-1) receive a call
10-1) receiver connection reply(ANM)
11-2) Request a stop the sending of the commercial information ringback tone (Release request: REL)
11-3) Release confirm(RLC)
12-1) Connect the communication line
13-1) Disconnect a call
14-1) Release request(REL)
15-1) Release confirm(RLC)
16-1) Disconnect

FIG. 6

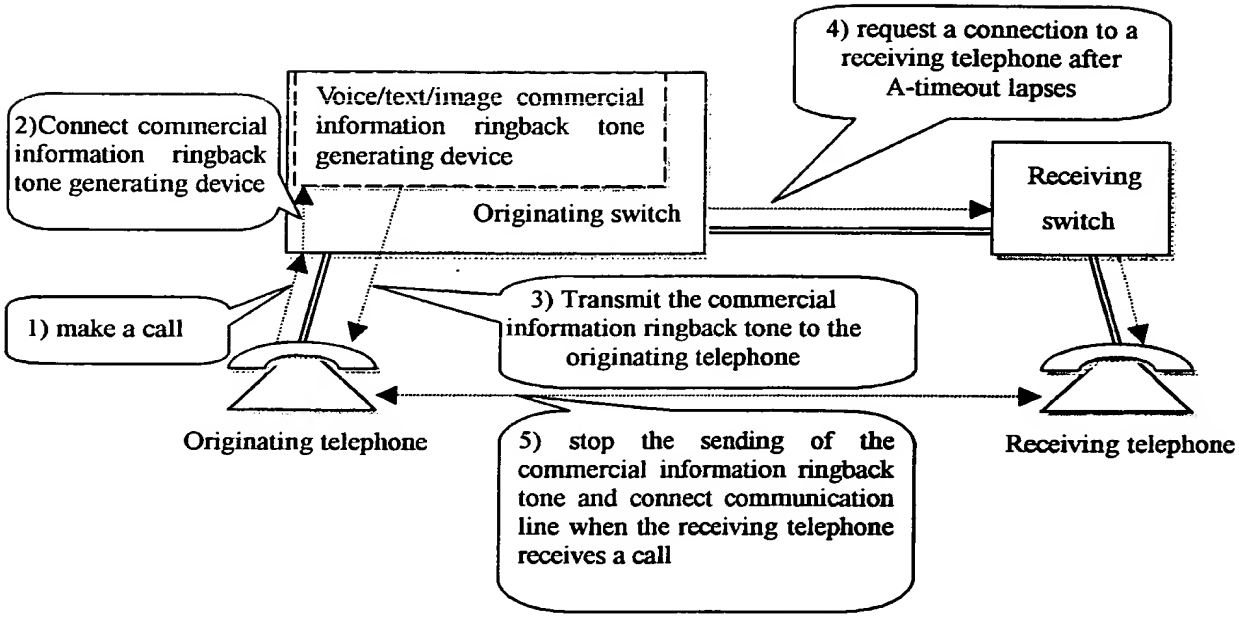

4) request a connection to a receiving telephone after A-timeout lapses
Voice/text/image commercial information ringback tone generating device
2)Connect commercial information ringback tone generating device
Originating switch
Receiving switch
1) make a call
3) Transmit the commercial information ringback tone to the originating telephone
Originating telephone
5) stop the sending of the commercial information ringback tone and connect communication line when the receiving telephone receives a call
Receiving telephone

FIG. 7

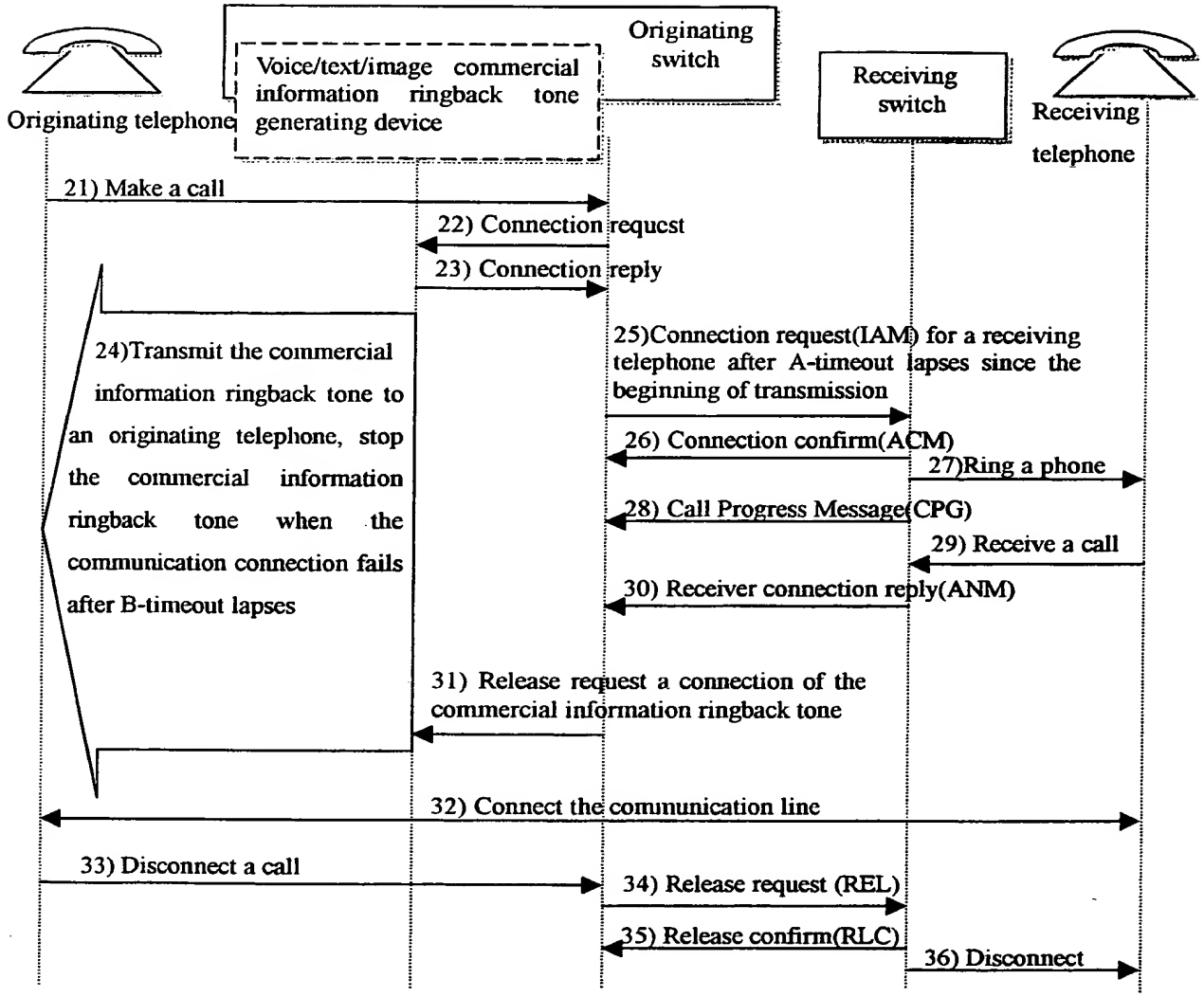

Originating telephone
Voice/text/image commercial information ringback tone generating device
Originating switch
Receiving switch
Receiving telephone
21) Make a call
22) Connection request
23) Connection reply
24)Transmit the commercial information ringback tone to an originating telephone, stop the commercial information ringback tone when the communication connection fails after B-timeout lapses
25)Connection request(IAM) for a receiving telephone after A-timeout lapses since the beginning of transmission
26) Connection confirm(ACM)
27)Ring a phone
28) Call Progress Message(CPG)
29) Receive a call
30) Receiver connection reply(ANM)
31) Release request a connection of the commercial information ringback tone
32) Connect the communication line
33) Disconnect a call
34) Release request (REL)
35) Release confirm(RLC)
36) Disconnect

FIG. 8

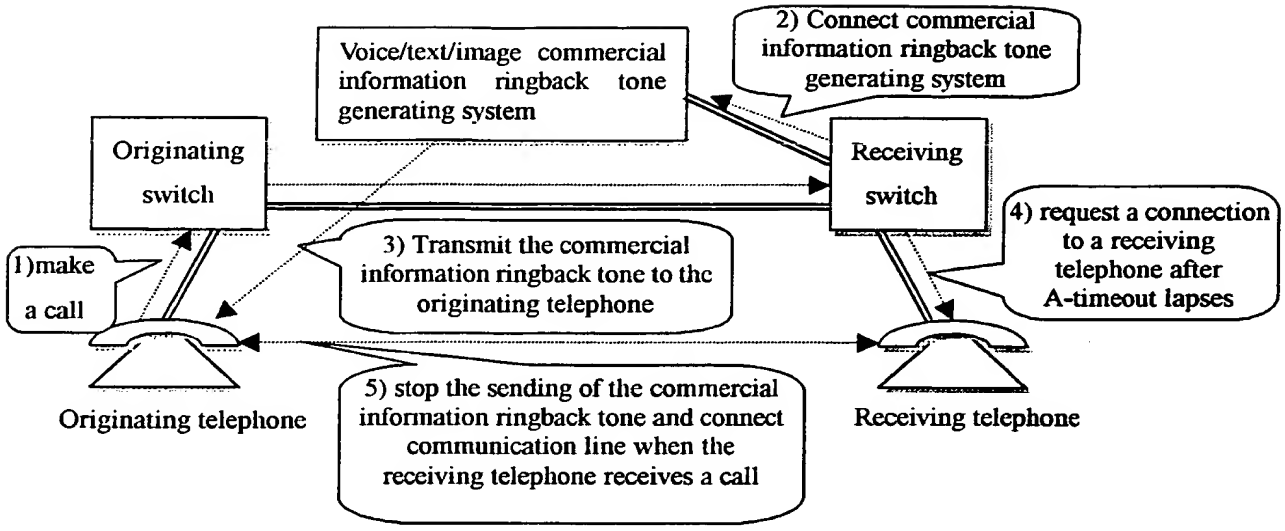

Voice/text/image commercial information ringback tone generating system
2) Connect commercial information ringback tone generating system
Originating switch
Receiving switch
1)make a call
3) Transmit the commercial information ringback tone to the originating telephone
4) request a connection to a receiving telephone after A-timeout lapses
5) stop the sending of the commercial information ringback tone and connect communication line when the receiving telephone receives a call
Originating telephone
Receiving telephone

FIG. 9a

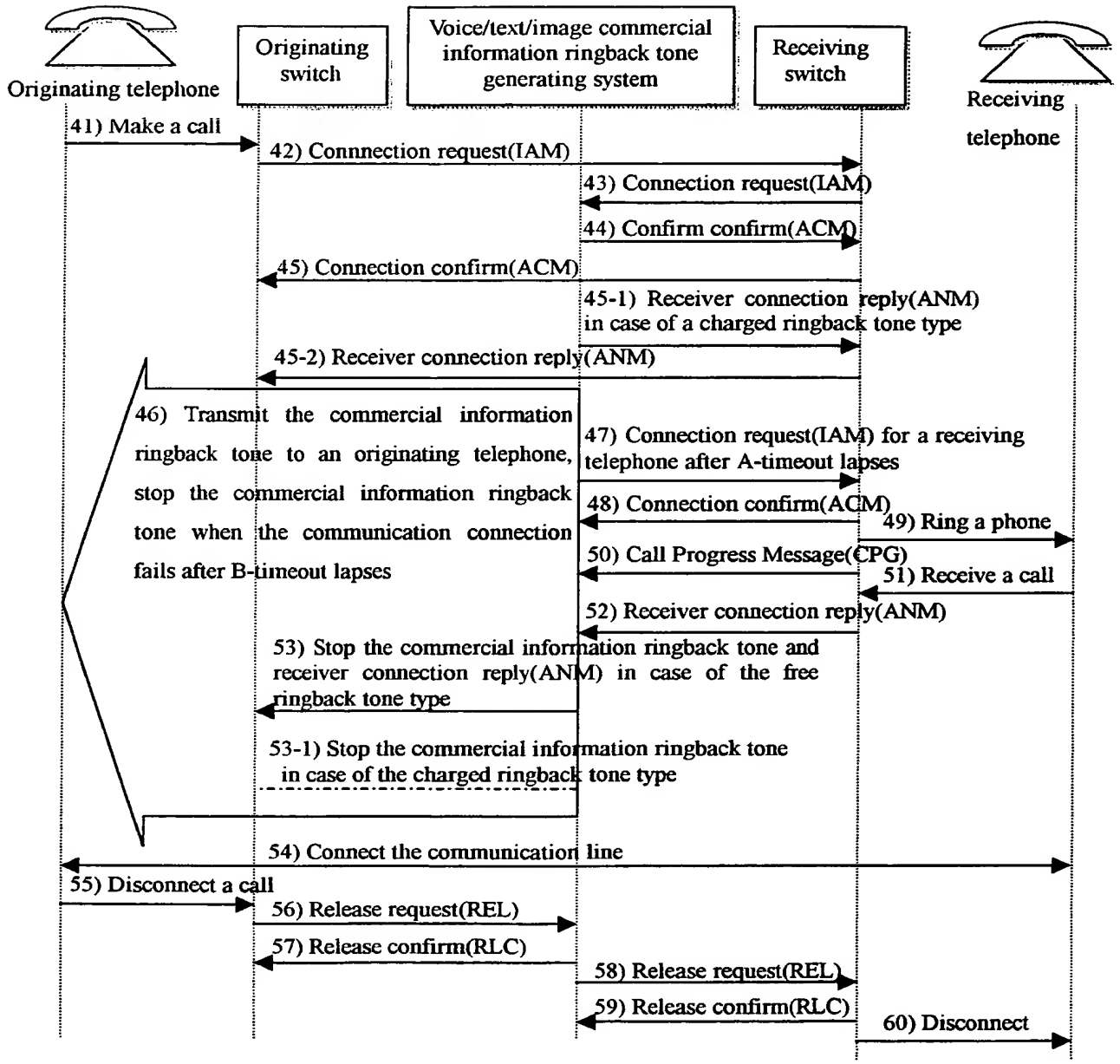

Originating telephone
Originating switch
Voice/text/image commercial information ringback tone generating system
Receiving switch
Receiving telephone
41) Make a call
42) Connnection request(IAM)
43) Connection request(IAM)
44) Confirm confirm(ACM)
45) Connection confirm(ACM)
45-1) Receiver connection reply(ANM) in case of a charged ringback tone type
45-2) Receiver connection reply(ANM)
46) Transmit the commercial information ringback tone to an originating telephone, stop the commercial information ringback tone when the communication connection fails after B-timeout lapses
47) Connection request(IAM) for a receiving telephone after A-timeout lapses
48) Connection confirm(ACM)
49) Ring a phone
50) Call Progress Message(CPG)
51) Receive a call
52) Receiver connection reply(ANM)
53) Stop the commercial information ringback tone and receiver connection reply(ANM) in case of the free ringback tone type
53-1) Stop the commercial information ringback tone in case of the charged ringback tone type
54) Connect the communication line
55) Disconnect a call
56) Release request(REL)
57) Release confirm(RLC)
58) Release request(REL)
59) Release confirm(RLC)
60) Disconnect

FIG. 9b

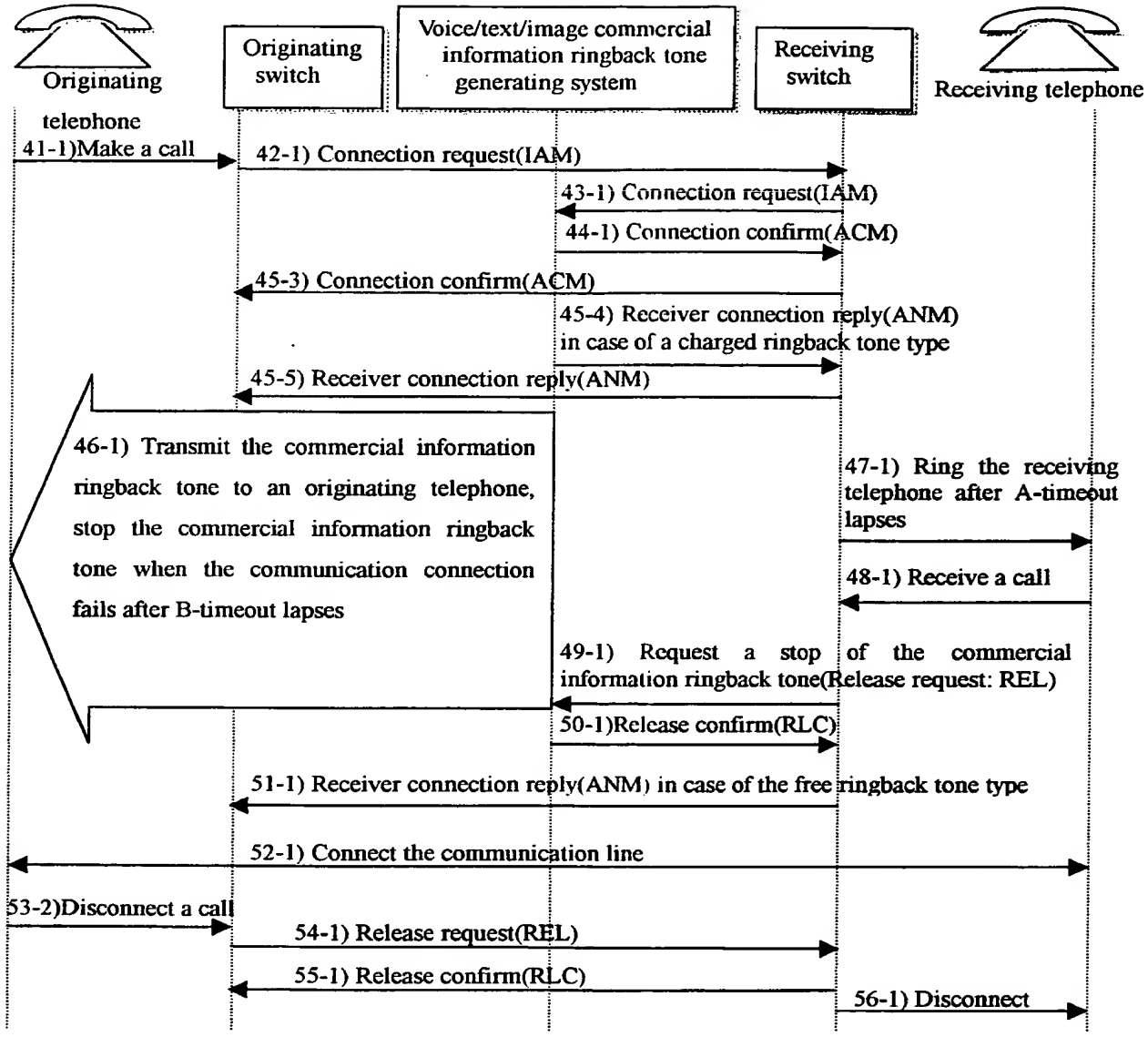

Originating telephone
Originating switch
Voice/text/image commercial information ringback tone generating system
Receiving switch
Receiving telephone
41-1)Make a call
42-1) Connection request(IAM)
43-1) Connection request(IAM)
44-1) Connection confirm(ACM)
45-3) Connection confirm(ACM)
45-4) Receiver connection reply(ANM) in case of a charged ringback tone type
45-5) Receiver connection reply(ANM)
46-1) Transmit the commercial information ringback tone to an originating telephone, stop the commercial information ringback tone when the communication connection fails after B-timeout lapses
47-1) Ring the receiving telephone after A-timeout lapses
48-1) Receive a call
49-1) Request a stop of the commercial information ringback tone(Release request: REL)
50-1)Release confirm(RLC)
51-1) Receiver connection reply(ANM) in case of the free ringback tone type
52-1) Connect the communication line
53-2)Disconnect a call
54-1) Release request(REL)
55-1) Release confirm(RLC)
56-1) Disconnect

FIG. 10

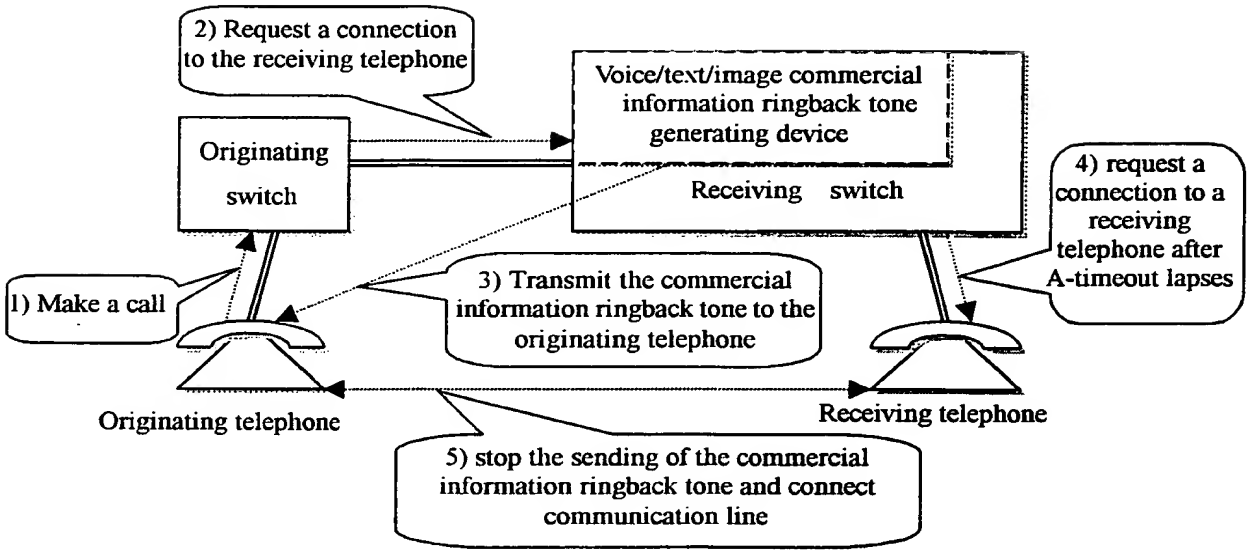

2) Request a connection to the receiving telephone
Voice/text/image commercial information ringback tone generating device
Originating switch
Receiving switch
4) request a connection to a receiving telephone after A-timeout lapses
1) Make a call
3) Transmit the commercial information ringback tone to the originating telephone
Originating telephone
Receiving telephone
5) stop the sending of the commercial information ringback tone and connect communication line

FIG. 11

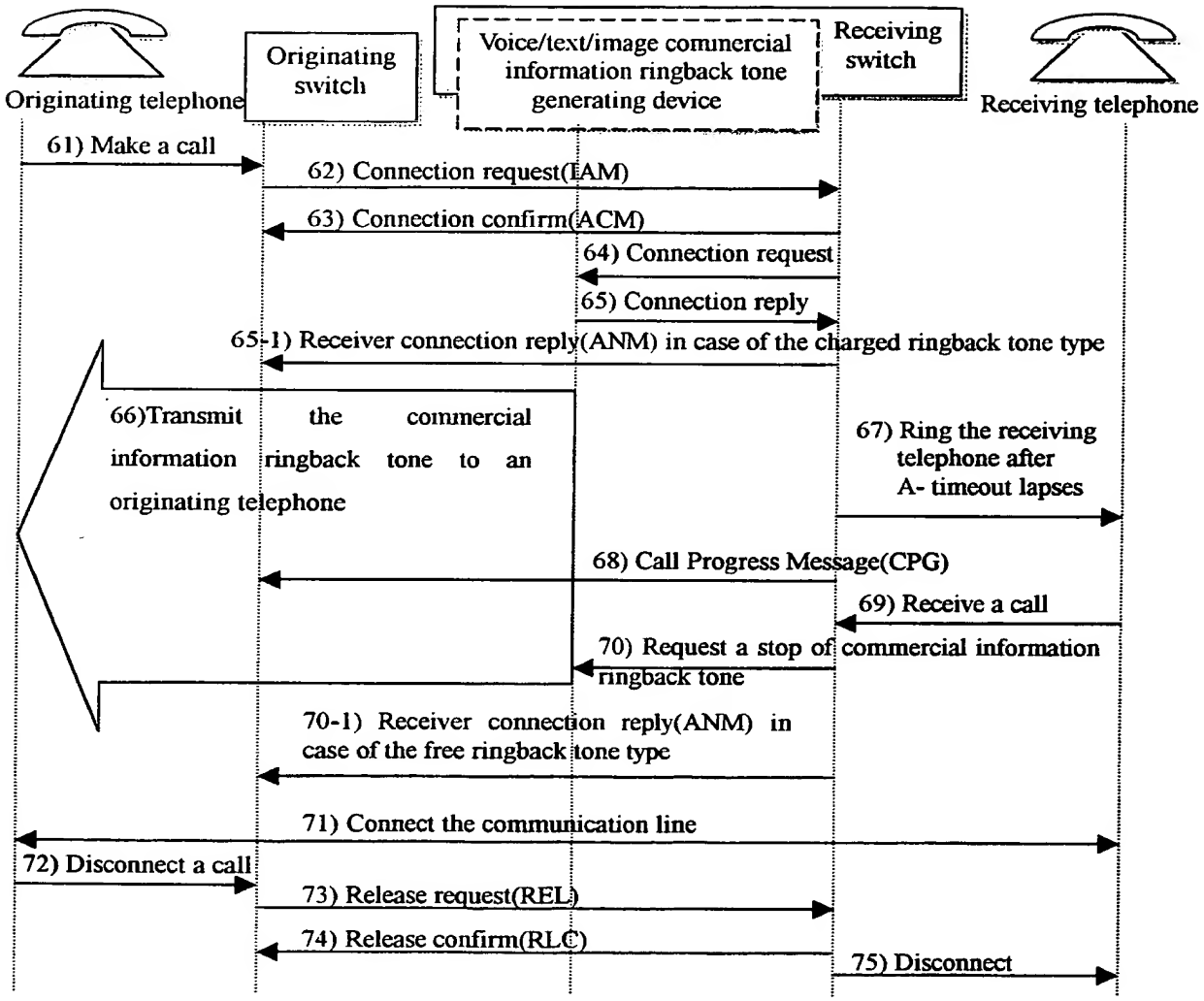

Originating telephone
Originating switch
Voice/text/image commercial information ringback tone generating device
Receiving switch
Receiving telephone
61) Make a call
62) Connection request(IAM)
63) Connection confirm(ACM)
64) Connection request
65) Connection reply
65-1) Receiver connection reply(ANM) in case of the charged ringback tone type
66)Transmit the commercial information ringback tone to an originating telephone
67) Ring the receiving telephone after A- timeout lapses
68) Call Progress Message(CPG)
69) Receive a call
70) Request a stop of commercial information ringback tone
70-1) Receiver connection reply(ANM) in case of the free ringback tone type
71) Connect the communication line
72) Disconnect a call
73) Release request(REL)
74) Release confirm(RLC)
75) Disconnect

FIG. 12

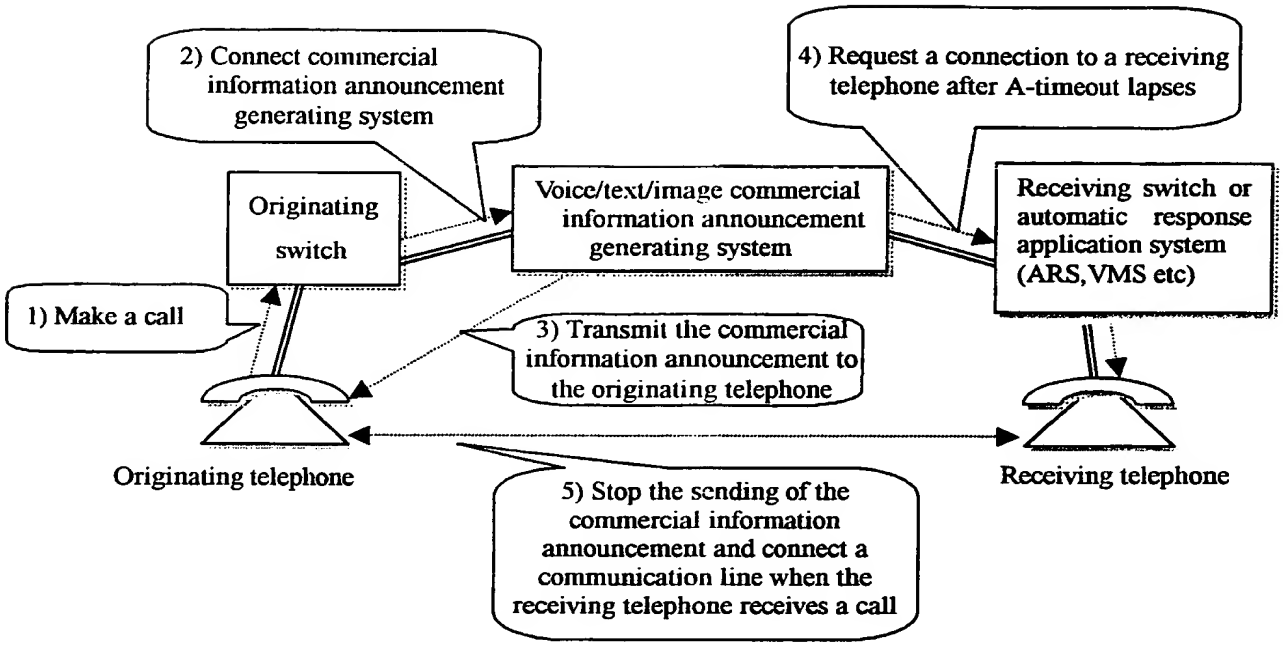

2) Connect commercial information announcement generating system
4) Request a connection to a receiving telephone after A-timeout lapses
Originating switch
Voice/text/image commercial information announcement generating system
Receiving switch or automatic response application system (ARS, VMS etc)
1) Make a call
3) Transmit the commercial information announcement to the originating telephone
Originating telephone
Receiving telephone
5) Stop the sending of the commercial information announcement and connect a communication line when the receiving telephone receives a call

FIG. 13

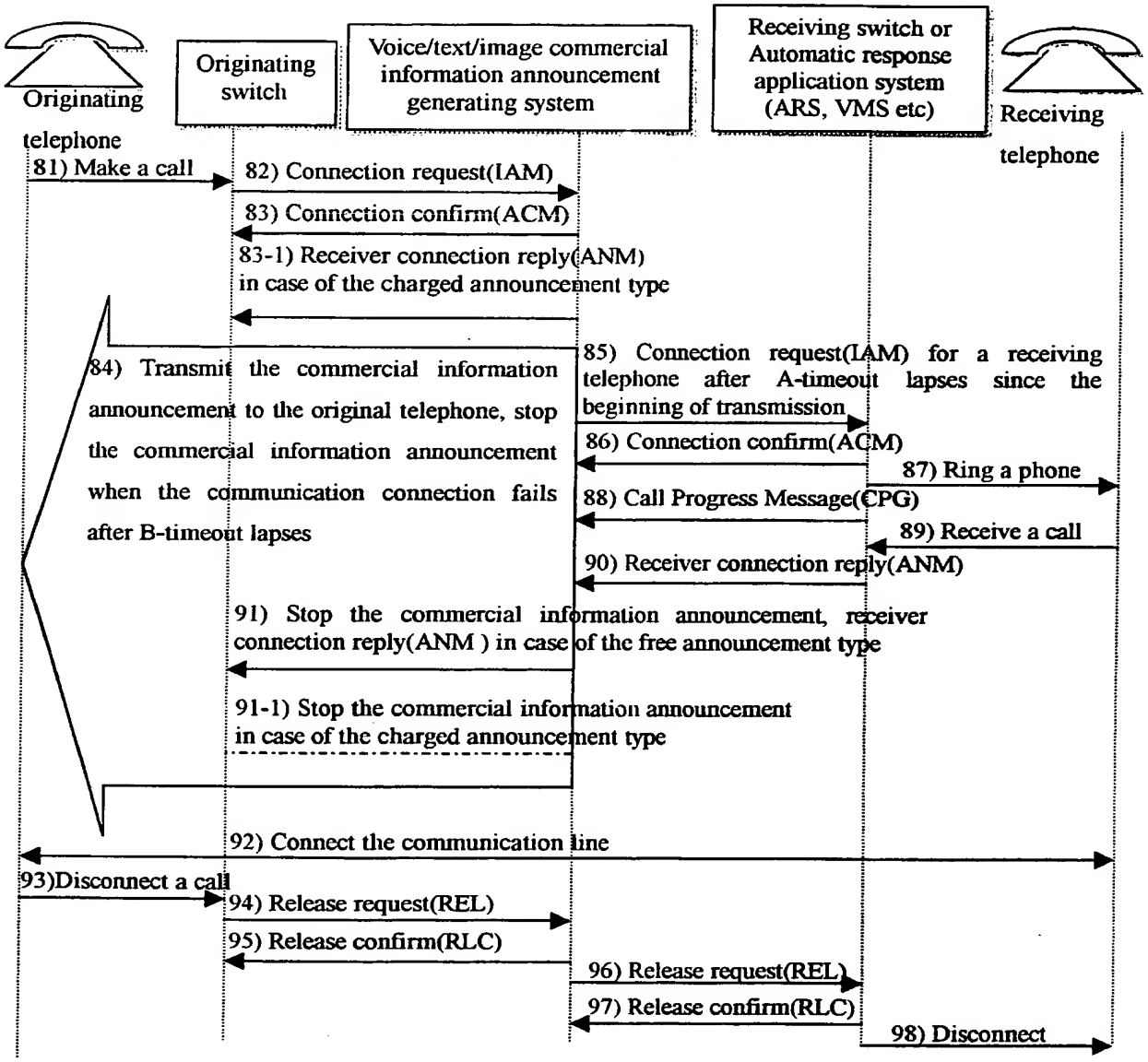

Originating telephone
Originating switch
Voice/text/image commercial information announcement generating system
Receiving switch or Automatic response application system (ARS, VMS etc)
Receiving telephone
81) Make a call
82) Connection request(IAM)
83) Connection confirm(ACM)
83-1) Receiver connection reply(ANM) in case of the charged announcement type
84) Transmit the commercial information announcement to the original telephone, stop the commercial information announcement when the communication connection fails after B-timeout lapses
85) Connection request(IAM) for a receiving telephone after A-timeout lapses since the beginning of transmission
86) Connection confirm(ACM)
87) Ring a phone
88) Call Progress Message(CPG)
89) Receive a call
90) Receiver connection reply(ANM)
91) Stop the commercial information announcement, receiver connection reply(ANM) in case of the free announcement type
91-1) Stop the commercial information announcement in case of the charged announcement type
92) Connect the communication line
93)Disconnect a call
94) Release request(REL)
95) Release confirm(RLC)
96) Release request(REL)
97) Release confirm(RLC)
98) Disconnect

FIG. 14

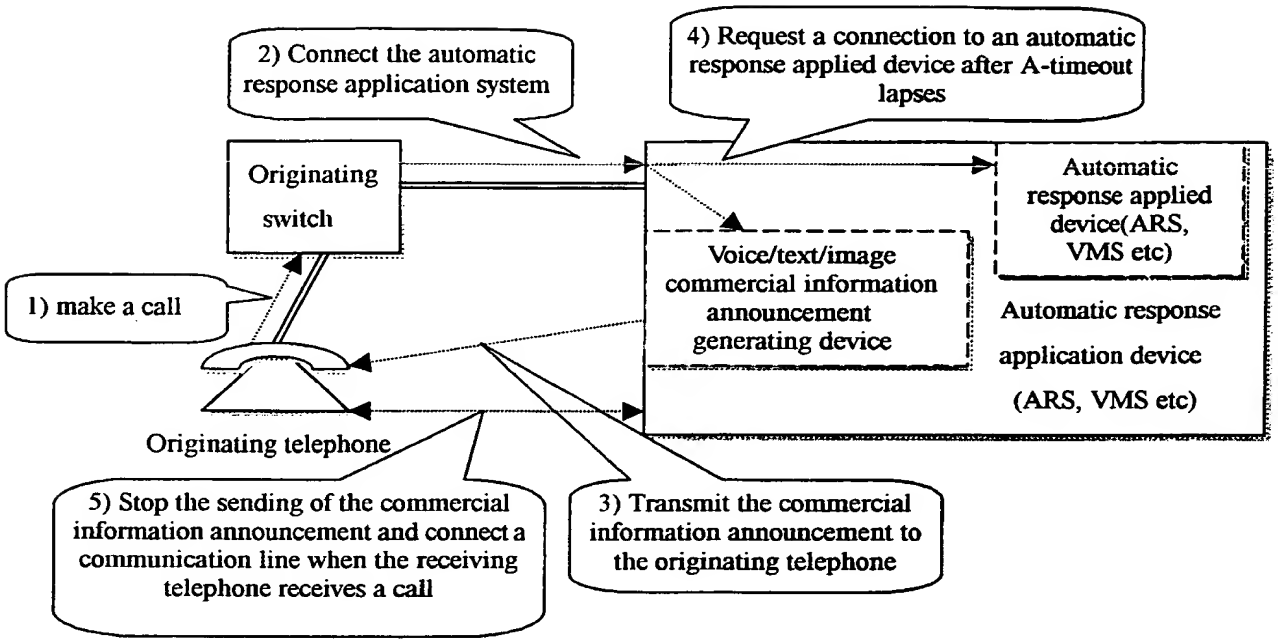

2) Connect the automatic response application system
4) Request a connection to an automatic response applied device after A-timeout lapses
Originating switch
Automatic response applied device(ARS, VMS etc)
Voice/text/image commercial information announcement generating device
Automatic response application device (ARS, VMS etc)
1) make a call
Originating telephone
5) Stop the sending of the commercial information announcement and connect a communication line when the receiving telephone receives a call
3) Transmit the commercial information announcement to the originating telephone

FIG. 15

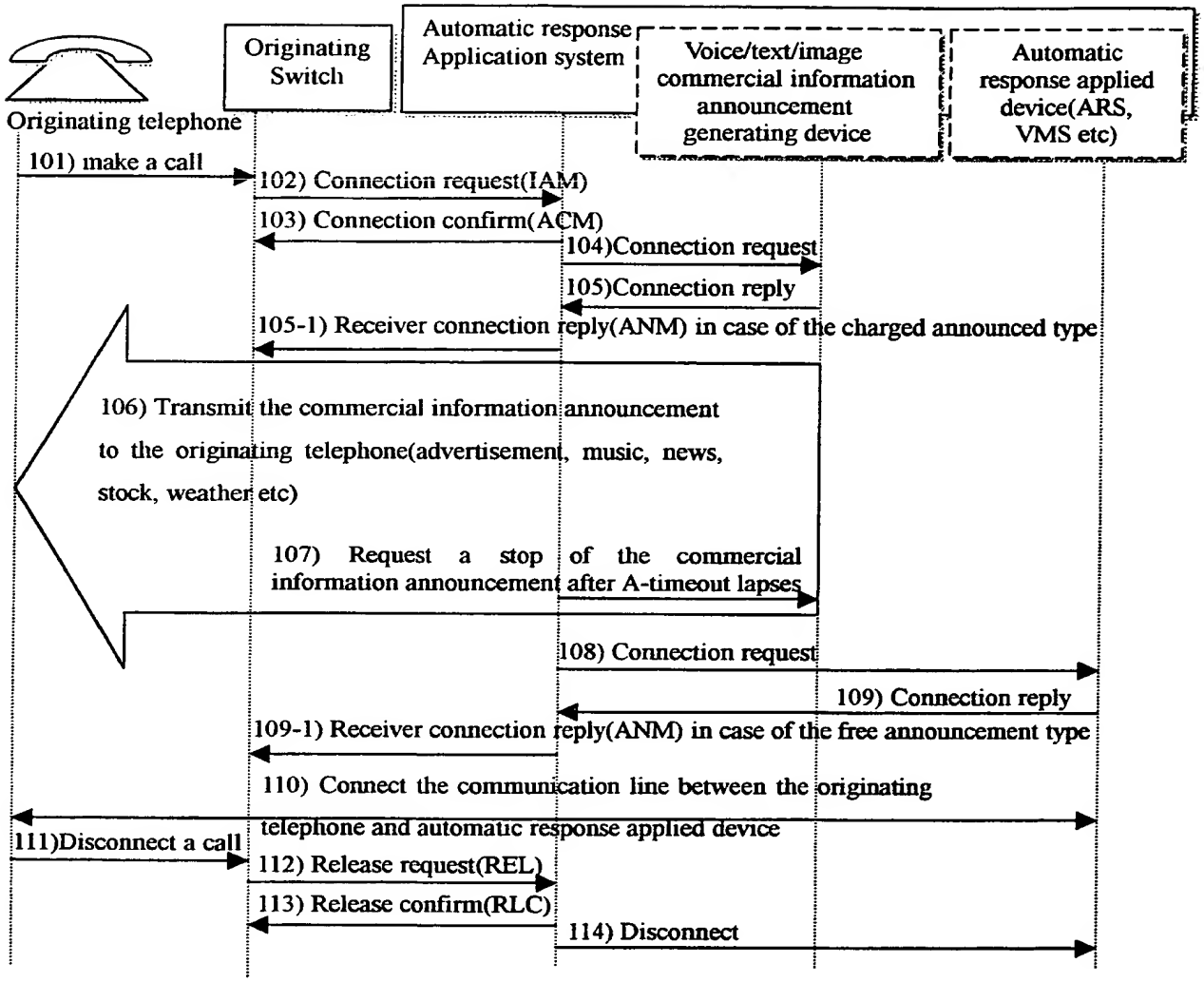

Originating telephone
Originating Switch
Automatic response Application system
Voice/text/image commercial information announcement generating device
Automatic response applied device(ARS, VMS etc)
101) make a call
102) Connection request(IAM)
103) Connection confirm(ACM)
104)Connection request
105)Connection reply
105-1) Receiver connection reply(ANM) in case of the charged announced type
106) Transmit the commercial information announcement to the originating telephone(advertisement, music, news, stock, weather etc)
107) Request a stop of the commercial information announcement after A-timeout lapses
108) Connection request
109) Connection reply
109-1) Receiver connection reply(ANM) in case of the free announcement type
110) Connect the communication line between the originating telephone and automatic response applied device
111)Disconnect a call
112) Release request(REL)
113) Release confirm(RLC)
114) Disconnect

FIG. 17

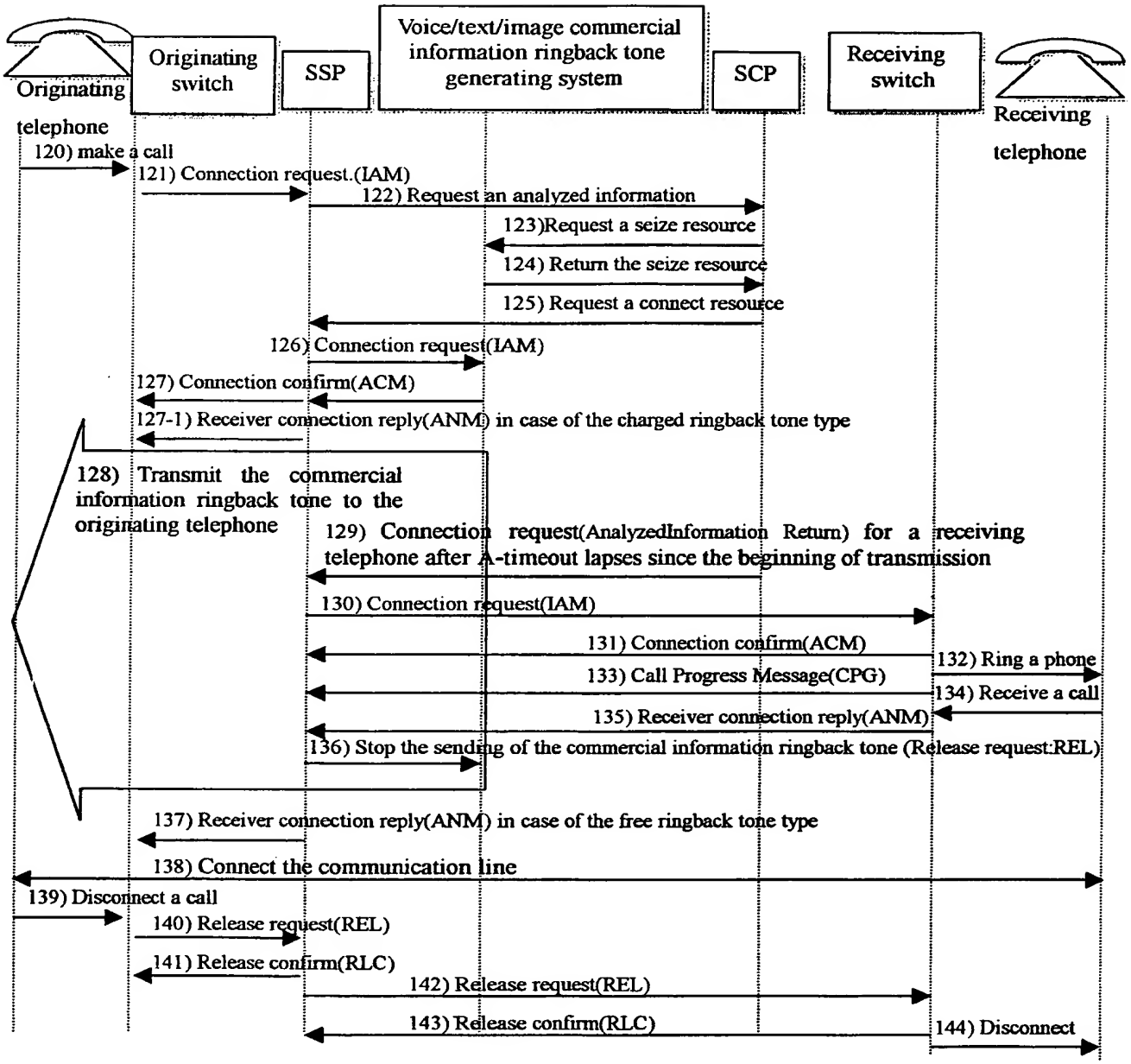

Originating telephone
Originating switch
SSP
Voice/text/image commercial information ringback tone generating system
SCP
Receiving switch
Receiving telephone
120) make a call
121) Connection request.(IAM)
122) Request an analyzed information
123)Request a seize resource
124) Return the seize resource
125) Request a connect resource
126) Connection request(IAM)
127) Connection confirm(ACM)
127-1) Receiver connection reply(ANM) in case of the charged ringback tone type
128) Transmit the commercial information ringback tone to the originating telephone
129) Connection request(AnalyzedInformation Return) for a receiving telephone after A-timeout lapses since the beginning of transmission
130) Connection request(IAM)
131) Connection confirm(ACM)
132) Ring a phone
133) Call Progress Message(CPG)
134) Receive a call
135) Receiver connection reply(ANM)
136) Stop the sending of the commercial information ringback tone (Release request:REL)
137) Receiver connection reply(ANM) in case of the free ringback tone type
138) Connect the communication line
139) Disconnect a call
140) Release request(REL)
141) Release confirm(RLC)
142) Release request(REL)
143) Release confirm(RLC)
144) Disconnect

FIG. 16

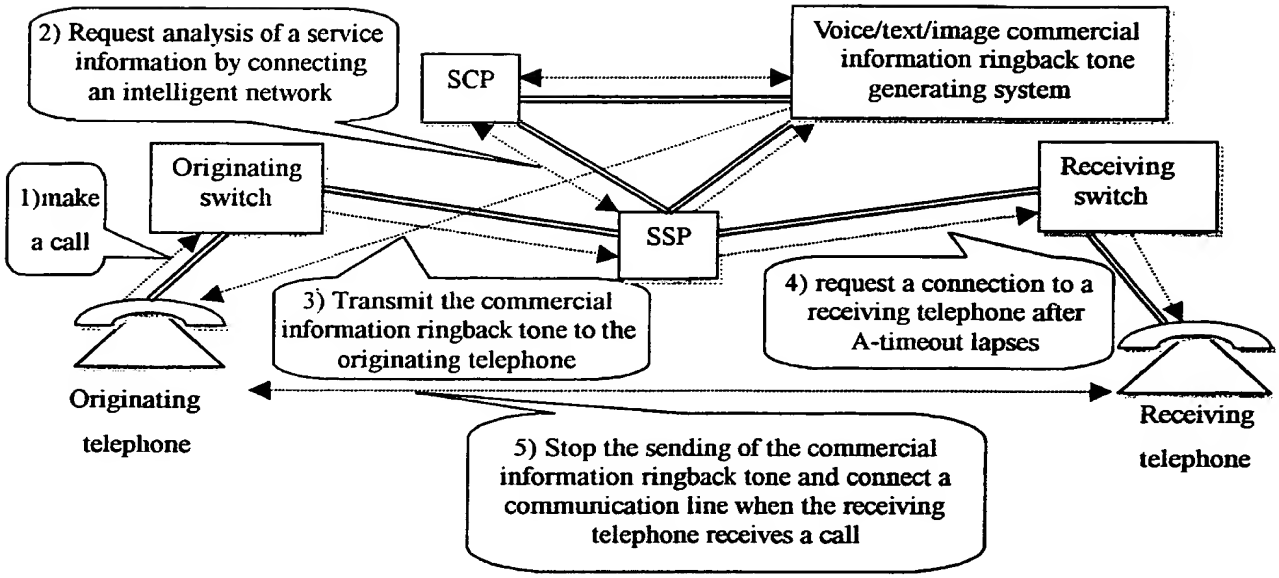

2) Request analysis of a service information by connecting an intelligent network
SCP
Voice/text/image commercial information ringback tone generating system
1)make a call
Originating switch
SSP
Receiving switch
3) Transmit the commercial information ringback tone to the originating telephone
4) request a connection to a receiving telephone after A-timeout lapses
Originating telephone
Receiving telephone
5) Stop the sending of the commercial information ringback tone and connect a communication line when the receiving telephone receives a call

FIG. 18

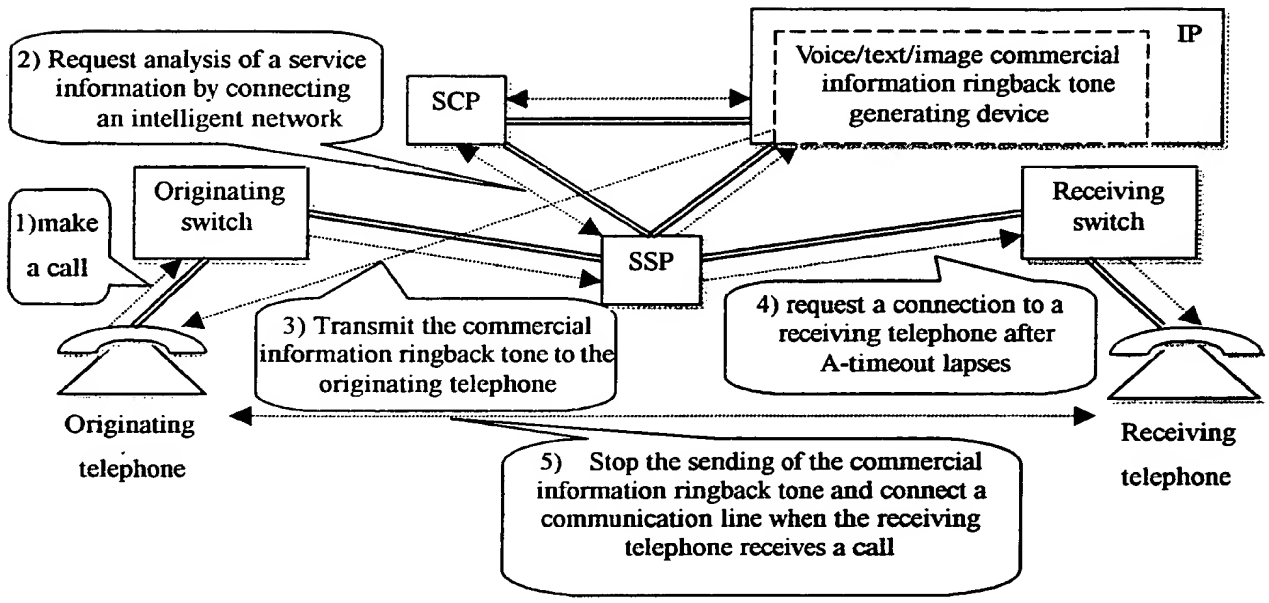
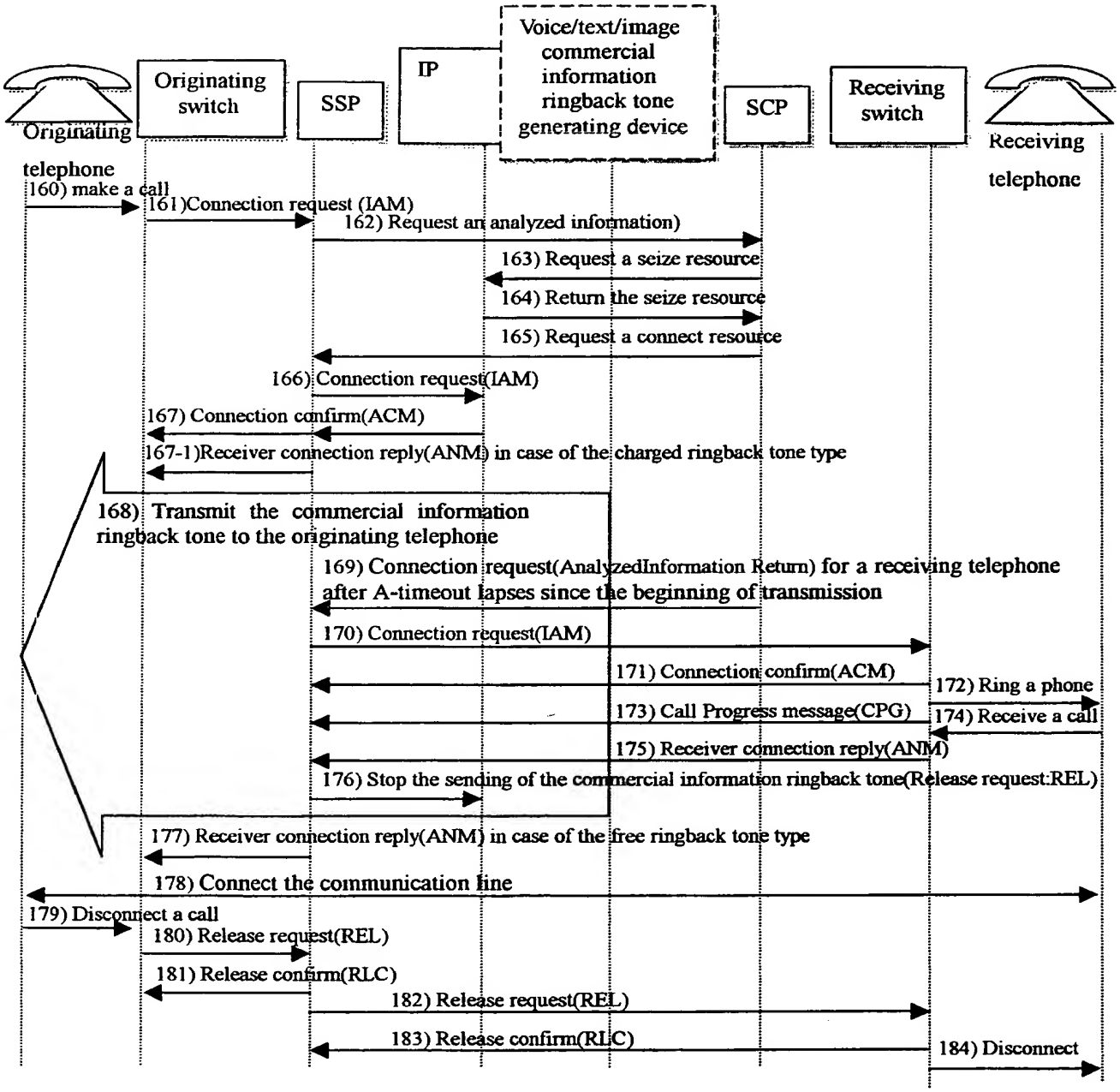

2) Request analysis of a service information by connecting an intelligent network
SCP
IP
Voice/text/image commercial information ringback tone generating device
1)make a call
Originating switch
SSP
Receiving switch
3) Transmit the commercial information ringback tone to the originating telephone
4) request a connection to a receiving telephone after A-timeout lapses
Originating telephone
Receiving telephone
5) Stop the sending of the commercial information ringback tone and connect a communication line when the receiving telephone receives a call

FIG. 19


Originating telephone
Originating switch
SSP
IP
Voice/text/image commercial information ringback tone generating device
SCP
Receiving switch
Receiving telephone
160) make a call
161)Connection request (IAM)
162) Request an analyzed information)
163) Request a seize resource
164) Return the seize resource
165) Request a connect resource
166) Connection request(IAM)
167) Connection confirm(ACM)
167-1)Receiver connection reply(ANM) in case of the charged ringback tone type
168) Transmit the commercial information ringback tone to the originating telephone
169) Connection request(AnalyzedInformation Return) for a receiving telephone after A-timeout lapses since the beginning of transmission
170) Connection request(IAM)
171) Connection confirm(ACM)
172) Ring a phone
173) Call Progress message(CPG)
174) Receive a call
175) Receiver connection reply(ANM)
176) Stop the sending of the commercial information ringback tone(Release request:REL)
177) Receiver connection reply(ANM) in case of the free ringback tone type
178) Connect the communication line
179) Disconnect a call
180) Release request(REL)
181) Release confirm(RLC)
182) Release request(REL)
183) Release confirm(RLC)
184) Disconnect